TIMES

Journal for the Family Physician

June, 1960

HYPERTENSION: TYPES AND TREATMENT

URINARY CALCULOGENESIS

PUBLIC RELATIONS AND THE EYE



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Literature and professional samples available on request.

- 1. Fremont, R.E.: Personal Communication (Dec., 1959):
- 2. Summary of Case Reports on File, Ives-Cameron Company.
- 3. Sherber, D.A.: Personal Communication (Oct., 1959).

4. Russek, H.I.: Personal Communication (Oct., 1959).



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William H. Havener, M. D.

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Paul, W.D.; Dryer, R.L., and Routh, J.L.: J.Am. Pharm. Assn. (Scient. Ed.) 39:21 (Jan.) 1950. 2

Fremont-Smith, P.:

J. Am. Med. Assn. 158:386

(June 4) 1955.

3

Tebrock, H. E.: Ind. Med. & Surg. 20:480-482, 1951.

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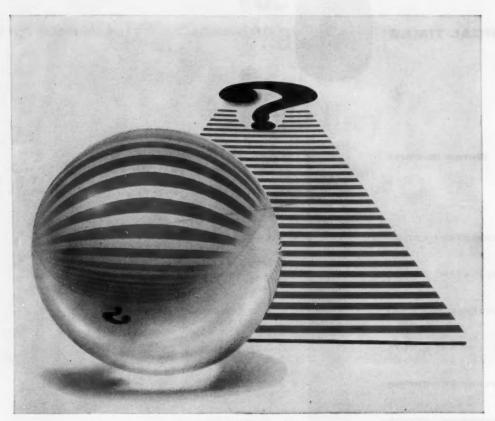
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References: 1. Dowling, H. F.: Postgrad. Med. 28:594 (June) 1988. 2.

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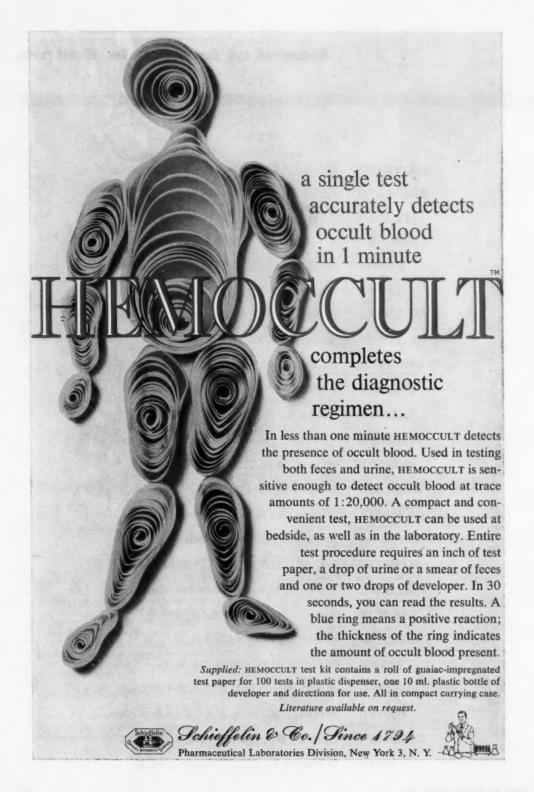
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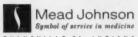
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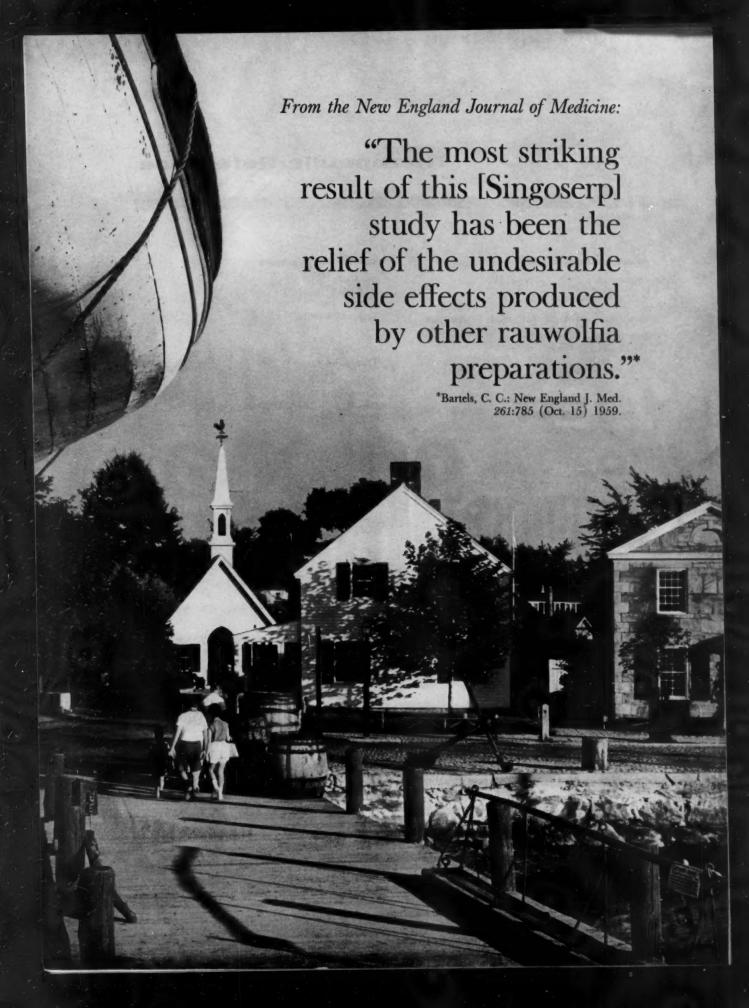
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because it lowers their blood pressure without rauwolfia side effects (white, scored); bottles of 100. a/278888 C 1 B A



Dependable, prompt-acting daytime sedative.

Broad margin of safety. Virtually no drowsiness. Over a quarter century of successful clinical use. Alurate is effective by itself and compatible with a wide range of other drugs. To avoid barbiturate identification or abuse, Alurate is available as Elixir Alurate (cherry-red) and Elixir Alurate Verdum (emerald-green).

Adults: ½ to 1 teaspoonful of either Elixir Alurate or Elixir Alurate Verdum, 3 times daily.
ALURATE®—brand of aprobarbital

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc
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Off the Record...

Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported sculptulite figurine . . . an amusing caricature of a physician . . . will be sent in appreciation for each accepted contribution.

Pull Out the Props

Recently while checking into a patient's past OB history she informed me that with her last "youngun" she was in hard labor for seven days. I asked her what the trouble had been and was told that she had had the complication of a "propped baby."

I told her this was a new term to me and asked her to explain further.

She thought a moment. "Well, he was propped. You see, he had one foot propped on one side, the other foot propped on the other side—and he just wouldn't come out."

B.J.C., M.D. Greensboro, N. C.

Great For Motor Sludge, Too

Some time ago I prescribed a certain drug for a patient's cystitis. After a while I received this note from her:

"Doctor, your medicine was wonderful. My bladder feels fine, but what also delights me is that it even got rid of the stain in our toilet bowl. Sincerely, A Grateful Patient."

E.C.J., M.D. Bellingham, Wash.

Right On Both Counts

"A high index of suspicion is the best aid in making a good diagnosis" — this was the principle one of my fellow interns worked on, and she was doing a great job on the medical service.

She was especially proud of having discov-

ered that one of her patients had a history of gout. No one else had thought of this possibility.

She brought the medical resident over to the patient's bed and asked the patient, "Do you have gout?"

The elderly Jewish patient looked surprised at the question, which he thought concerned his financial affairs. But then he shrugged and replied cheerfully, "Sure, I've got plenty of gelt."

S.A.B., M.D. Philadelphia, Pa.

Southern Hospitality

One busy day during the midsummer heat that August bestows upon the South, a well-dressed colored woman came into my office. She had a small baby in her arms and another child at her knee. She settled herself comfortably in the air-conditioned waiting room, smiled and greeted my nurse as though she were expected, and proceeded to feed the baby his bottle.

As the afternoon progressed and my nurse saw that she was still patiently waiting, my nurse asked her if she could be of any help. "No, ma'am, I'm just waitin'," she replied.

The hot afternoon wore on, and office hours were drawing to a close. It had been a busy day, and our friend had been forgotten with the coming and going of patients. As the name of the final appointment was called, there,

Concluded on page 29a

NEW ORAL SYNTHETIC PENICILIN

The new "spoon" penicillin

Blood levels
after oral
administration:
twice as high
as oral potassium
penicillin V.¹

AVERAGE SERUM CONCENTRATIONS (mcg./ml.)

3.0

2.0

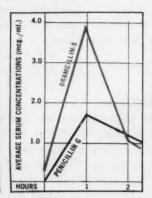
PENICILIN S

HOURS

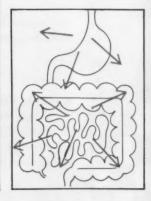
1 2

...and

twice as
high as
intramuscular
penicillin G
potassium.



...absorbed speedily throughout the gastrointestinal tract—stomach to colon.²





that surpasses* the "needle"

Effective against "resistant" staphylococci: Some strains of staphylococci resistant to penicillins G, O and V in vitro exhibit sensitivity to potassium phenethicillin (DRAMCILLIN-S). This synthetic penicillin appears more resistant than natural penicillins to inactivation by staphylococcal penicillinase.

Allergenicity: It is not as yet possible to draw definite conclusions regarding the incidence of allergenicity to DRAMCIL-LIN-S, or to its cross-allergenicity with natural penicillins. It is recognized that oral therapy presents less danger of severe allergic reactions than does parenteral penicillin therapy. The usual precautions for oral penicillin therapy should always be observed. Special care should be exercised in patients with histories of asthma, hay fever, urticaria, or previous reaction to penicillin.

Indications: DRAMCILLIN-S is indicated in the treatment of infections caused by

penicillin-sensitive organisms. Like all oral penicillins, it is not recommended at present in deep-seated or chronic infections, subacute bacterial endocarditis, meningitis or syphilis.

Dosage: One or 2 teaspoonfuls (125 mg.), three or four times daily, depending on the severity of the infection. To assure optimum blood levels, it is advised that this medication be taken in the fasting state. Beta hemolytic streptococcal infections should be treated for at least 10 days.

Availability: Bottles of 30 and 60 cc. Each teaspoonful (5 cc.) supplies 125 mg. DRAMCILLIN-S, equivalent to 200,000 units.

References: 1. Wright, W.: Cited by Morigi et al. 2. Pindell, M. H.; Tisch, D. E.; Hoekstra, J. B., and Reiffenstein, J. C.: Antibiotics Annual, 1959-1960, p. 119. 3. Morigi, E. M.E.; Wheatley, W. B., and Albright, H.: Antibiotics Annual 1959-1960, p. 127. *with regard to immediate blood levels



"R Day"

for the neuritis patient can be tomorrow

"R Day"—when pain is relieved—can come early for patients with inflammatory (non-traumatic) neuritis if treatment with Protamide is started promptly after onset.

Protamide is the therapy of choice for either early or delayed treatment, but early use assures greatest efficacy.

For example, in a 4-year study¹ and a 26-month study² a combined total of 374 neuritis patients treated with Protamide during the first week of symptoms responded as follows:

60% required only 1 or 2 daily injections for complete relief 96% experienced excellent or good results with 5 or less injections

Thus, the neuritis patient's first visit—especially an early one affords the opportunity to speed his personal "R Day."

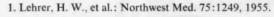
Protamide is available at pharmacies and supply houses in boxes of ten 1.3 cc. ampuls. Intramuscularly only, one ampul daily.

PROTAMIDE[®]



Sherman Laboratories





2. Smith, Richard T.: New York Med. 8:16, 1952.

much to our surprise, still sat the woman with her children. The baby now was consuming his second bottle.

Again she responded with a polite "No m'am" to an offer of assistance. She was "just waitin'." But the nurse persisted: Was she waiting to see the doctor? Which of the three was to be examined? Did she wish to make an appointment?

"Oh no ma'am," the woman said, her eyes open wide and large. "I don't need the doctor. You see, it's been so hot for my babies lately, so I thought I'd find a nice cool place to rest them in today. They feels much better now, I'm sure."

C.T.S., M.D. Jacksonville, N. C.

X-ray Eyes

I asked the young lady to unbutton her dress, and then thinking that the dress might be one that zipped up the back (instead of unbuttoning in front), I added, "Unless they are false ..."

Before I could add the word "buttons," she put her hands up to her chest and exclaimed, "They are—but how did you know?"

Anonymous

A Hep Kid

A 10-year-old, quite outgoing male patient was examined in my office for possible hepatitis. A careful history was taken in reference to all complaints in connection with this organ's system. However, when we directed our attention to the nature and color of the boy's stools, some difficulty ensued.

The young gentleman was asked whether or not he had clay-colored stools. When it was obvious that he had not understood the question, I pointed to a refuse container standing by the door. The container was grayish in color and square in outline.

I said, "My good man, have you been having any stools that look like this?"

He gazed at the container, still looking very much puzzled. After a few moments he said, "Do you mean square?"

G.M.W., M.D. Clarksville, Ind.

Patient Papa

On my round of hospital calls I was coming out of a room on the maternity floor when I overheard a male voice with a foreign accent speaking angrily to one of the nurses.

"I came up specially to see my new baby and now you tell me I can't see it. YOU CAN KEEP HIM!"

With that Papa turned and stalked away. S.L.K., M.D.

Atlantic City, N. J.

To the Bitter End

Late one night, after listening to the same myriad of menial complaints from one of my most exasperating and persistent patients, I had a brilliant idea.

"John," I said, clasping him by the shoulder, "I always try to be honest and straightforward. Though I hate to admit it, your symptoms have me stumped. It doesn't seem fair to keep charging you and not get to the bottom of your problem. Therefore, I think I'll make an appointment for you with a specialist downtown. Perhaps he can get your problem straightened out."

I leaned back in my chair with what I hoped was a pious and humble smile. But I almost flipped backwards at John's reply.

Looking me straight in the eye and clasping me by the shoulder, he said: "Doc, that's what I like about you—you're always honest with a person. And just to show you how much faith I got in you, I'm gonna stick with you. I ain't goin' downtown to see that specialist!"

I still have John as a patient.

I ain't solved his problem yet.

C.T., M.D. Carmel, Ind.



What 5-fold absorption really means...

Appetite... Growth with

Gynal

Ion-exchange vitamin B_{12} administration provides unique superiority over previous oral forms of the vitamin. Present in Cynal as LB 12 ion-exchange vitamin B_{12} protects against gastric destruction and provides smooth, sustained absorption . . . up to 5 times 1 as great as with ordinary preparations.

Cynal therapy aids in stimulating appetite, increasing food intake in malnutrition and helps insure healthy growth.

A single dose of Cynal provides not only generous amounts of Vitamin B_{12} but also vitamins B_1 and B_6 as valuable adjuncts to absorption² and body metabolism.

LLOYD BROTHERS, INC.

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EACH "CHERRO-CHEW" TABLET CONTAINS:

Thiamine mononitrate

(vitamin B₁) 10 mg.

Vitamin B₁₂ (as L. B. 12*) 25 mcg.

Pyridoxine hydrochloride (vitamin B₀) 5 mg.

*Lloyd's absorption-enhancing complex of vitamin

B₁₂ (B₁₂ from Cobalamin Concentrate).

DOSE: One tablet per day.

SUPPLIED: Bottles of 50 tasty "Cherro-Chew" tablets.

REFERENCES: 1. Chow, B. F.: Gerontologia 2:213-221, 1958.
2. Chow, B. F., et al.: Am. J.
Clin. Nutrition 6:386, 1958.





FREQUENTLY INDICATED FOLLOWING ACCIDENTS

PARAFLEX FOR RELIEF OF PAIN-

When accidents result in sprains or strains, Paraflex reduces painful spasm promptly. Effective in a wide variety of rheumatic, arthritic and orthopedic disorders, Paraflex relieves pain, improves mobility and facilitates rehabilitation. Side effects seldom occur and are rarely severe enough to require discontinuation of therapy.

Average Dosage: Two tablets t.i.d. or q.i.d.

Supplied: Tablets, scored, orange, bottles of 50. Each tablet contains Paraflex, 250 mg.

McNEIL LABORATORIES, INC · PHILADELPHIA 32, PA.



Diagnosis, Please!

Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology, New York University College of Medicine and Director of Radiology, Bellevue Hospital Center

Fifty-eight-year-old Greek male. Chief Complaint: Right upper quadrant pain, not related to food intake. Lived in Greece for many years.

Which is your diagnosis?

- 1. Osteochondroma of rib
- 3. Porcelain gallbladder
- 2. Echinococcus cyst of liver
- 4. Calcified adrenal gland

(Answer on page 226a)





Conception control becomes a matter of special concern six to eight weeks post partum, when the new mother looks to you for advice on the best way to plan the balance of her family. Reliable conception control can be virtually assured with the diaphragm and jelly method, at least 98 per cent effective.

Now-cushioned comfort

... two ways

Your patient experiences special physical comfort when you prescribe either the standard RAMSES® Diaphragm or the new RAMSES BENDEX,® an arc-ing type diaphragm.

The regular RAMSES Diaphragm, suitable for most women, is made of pure gum rubber, with a dome that is unusually light and velvet smooth. The rim, encased in soft rubber, is flexible in all planes permitting complete freedom of motion. For those women who prefer or require an arcing type diaphragm, the new RAMSES BENDEX embodies all of the superior features of the conventional RAMSES Diaphragm, together with the very best hinge mechanism contained in any arcing diaphragm. It thus affords lateral flexibility to supply the proper degree of spring tension without discomfort.

RAMSES, BENDEX, and "TUK-A-WAY" are registered trade-marks of Julius Schmid, Inc.

*Active agent, dodecaethyleneglycol monolaurate 5%, in a base of long-lasting barrier effectiveness.

For added protection - RAMSES "10-Hour" Vaginal Jelly"

RAMSES Jelly is uniquely suited for use with either type of RAMSES Diaphragm. It is by design not static, but flows freely over the rim and surface of the diaphragm to add lubrication and to form a spermtight seal over the cervix, which is maintained for ten full hours after insertion. It is nonirritating and nontoxic.

You can now prescribe a complete unit for either type of diaphragm. RAMSES "TUK-A-WAY" Kit #701 contains the regular RAMSES Diaphragm with introducer and a 3-ounce tube of RAMSES Jelly; RAMSES "TUK-A-WAY" Kit #703 contains the RAMSES BENDEX Diaphragm and

Jelly tube. Each kit is supplied in an attractive plastic zippered case, beautifully finished inside and out. Both types are now available at key prescription pharmacies.



Reference: 1. Tietze, C.: Proceedings, Third International Coference Planned Parenthood, 1953.



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whenever digitalis is indicated

'LANOXIN' DIGOXIN

formerly known as Digoxin 'B. W. & Co.'

"If one digitalis agent were to be recommended for its adaptability to the many and varied clinical contingencies, we believe Digoxin would be the drug of choice."

Lown, B., and Levine, S. A.: Current Concepts in Digitalis Therapy, Boston, Little, Brown & Company, 1954, p. 23, par. 2.

LANOXIN' TABLETS 0.25 mg. scored (white) 0.5 mg. scored (green)

'LANOXIN' INJECTION 0.5 mg. in 2 cc. (I.M. or I.V.) "LANOXIN" ELIXIR PEDIATRIC 0.05 mg, in 1 cc.



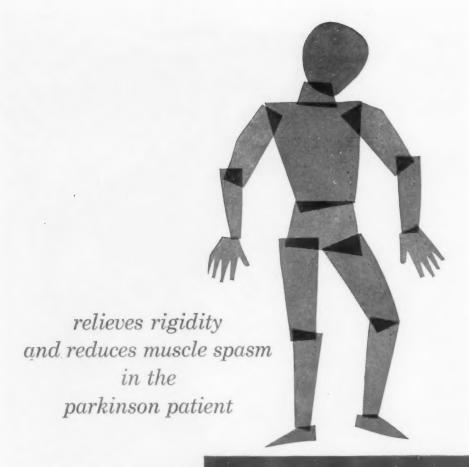
BURROUGHS WELLCOME & CO. (U.S.A.) INC., Tuckahoe, N.Y.



3.5 mg. neomycin (from sulfate) and 50 mg. sodium propionate per cc. - in 15 cc. dropper bottles.

*Lawson, G.W.: Diffuse Otitis Externa and Its Effective Treatment, Postgrad. Med. 22:501 (Nov.), 1957. AN OTIC SPECIALTY OF WHITE LABORATONIES, INC. KENILWORTH, NEW JERSEY





PHENOXENE

"Chlorphenoxamine (Phenoxene) exerts a gentle yet potent action . . . a muscle relaxant action also an energizing and stimulating action, without induction of excitement or agitation. Patients are able to move faster and more freely and with greater strength and longer endurance. It helps to loosen rigid muscles, and it successfully counteracts akinesia, tiredness, and weakness."*

*Doshay, L. J., and Constable, K.: Treatment of Paralysis Agitans with Chlorphenoxamine Hydrochloride, J.A.M.A. 170:37 (May 2) 1959.

A REPRINT OF THE COMPLETE ARTICLE AND CLINICAL TRIAL SUPPLIES ARE AVAILABLE ON REQUEST.



Schering

allergic to animals? in any case, for allergic symptoms, the most widely used antihistamine is CHLOR-TRIMETON.

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allergic?

There's hardly a reason *not* to prescribe Doriden for every patient who needs a good night's sleep.

OORIDEN® (glutethimide CIBA)

C I B A SUMMIT, N. J.



Why you can prescribe DORIDEN® for nearly all insomnia patients

Because it acts smoothly, because it is metabolized rapidly, because it apparently has no toxic effect on the liver or kidney, Doriden is indicated in many cases where barbiturates are unsuitable. With Doriden, for example, you can prescribe a good night's sleep for patients sensitive to barbiturates, elderly patients, patients with low vital capacity and poor respiratory reserve, and those unable to take barbiturates because of renal or hepatic disease. And Doriden patients awake refreshed -except in rare cases, there's no morning "hangover." SUPPLIED: Tablets, 0.5 Gm., 0.25 Gm., 0.125 Gm.

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- Low Back Sprain and Ruptured Intravertebral Disc

By F. Keith Bradford, M.D., Division of Neurosurgery, Department of Surgery, Baylor University Medical School, Houston, Texas.

- A Record System for Practitioners By Alfred S. Evans, M.D., Professor and Chairman, Department of Preventative Medi-cine, University of Wisconsin School of Medicine; Director, Wisconsin State Labora-tory of Hygiene, Madison, Wisconsin.
- * Retinal Vascular Changes in General Practice By Robert F. Lorenzen, M. D., Phoenix, Arizona.
- Principles of Dermatologic Diagnosis (Part III) By Morris Leider, M.D., Associate Director, Dermatology and Syphilology, New York University Post-Graduate Medical School,

New York, New York.

- · Current Approach to the Diagnosis of Rheumatoid Arthritis By David H. Neustadt, M.D., Louisville, Kentucky.
- The Contribution and Importance of the Mentally Ill to the Mentally Healthy By Walter J. Garre, M.D., Cherry Minor Medical Center, Seattle, Washington.
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keep the rheumatic man in motion





new Delenar

for the first time... total corticoid-relaxantanalgesic therapy

Now you can resolve musculoskeletal inflammation rapidly with the newest steroid . . . relax the attendant spasm with a proved muscle relaxant . . . and relieve the pain with a safe, inherently buffered analgesic... to keep the rheumatic man in motion • With new DELENAR you can resolve a broad range of rheumatic complaints. You can maintain the man in motion safely with the lower steroid dosage of DELENAR, in rheumatoid arthritis-traumatic arthritis-low-back complaints-fibrositis-chronic fibromyositis-rheumatoid spondylitis-tendinitis-and early osteoarthritis.

therapeutic actions

Dexamethasone* 0.15 mg. Newest Steroid for Anti-inflammatory Action Orphenadrine HCl 15 mg. Proved Muscle Relaxant, Helps Restore Motion Aluminum Aspirin 375 mg. Fast Analgesic Relief of Motion-Stopping Pain

Dosage: Two tablets q.i.d.; after improvement is obtained, gradually reduce dosage, and discontinue where possible. Packaging: DELENAR Tablets, bottles of 100 and 1,000. Precautions and Contraindications: Because DELENAR Tablets contain dexamethasone, the precautions observed with this corticoid apply to their use. *OERDHIL TH H-210

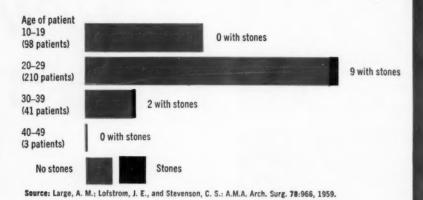
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CLINICAL BRIEFS FOR MODERN PRACTIC

Is pregnancy an etiological factor in the development of gallstones?

No definite relationship between pregnancy and the formation of gallstones was demonstrated in a recently concluded clinical study. Of 352 asymptomatic pregnant women studied by interview, clinical history, and cholecystography, only 11 (3.1 per cent) had gallstones.



When functional GI distress indicates medical management...

DECHOLIN® with BELLADONNA

provides true hydrocholeresis plus reliable spasmolysis

In medical management. ... recommended for patients with a clinical history of biliary tract disease when gallbladder disease has not been confirmed.*

Best, R. R.: Mod. Med. 25:264 (March 15) 1957.

Available: Decholin/Belladonna tablets (dehydrocholic acid, Ames) 3¾ gr. (250 mg.) and extract of belladonna ½ gr. (10 mg.). Bottles of 100 and 500.

DECHOLIN® for hydrocholeresis (dehydrocholic acid, AMES)

Available: DechoLin tablets: (dehydrocholic acid, Ames) 33/4 gr. (250 mg.). Bottles of 100, 500, and 1,000.



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Tofranil[®]

In the treatment of depression Tofrānil has established the remarkable record of producing remission or improvement in approximately 80 per cent of cases.¹⁻⁷

Tofrānil is well tolerated in usage is adaptable to either office or hospital practice—is administrable by either oral or intramuscular routes.

Tofrānil
a potent thymoleptic...
not a MAO inhibitor.

Does act effectively in *all* types of depression regardless of severity or chronicity.

Does not inhibit monoamine oxidase in brain or liver; produce CNS stimulation; or potentiate other drugs such as barbiturates and alcohol.

Detailed Literature Available on Request.

Tofrānil® (brand of imipramine HCl), tablets of 25 mg., bottles of 100. Ampuls for intramuscular administration only, each containing 25 mg. in 2 cc. of solution, cartons of 10 and 50.

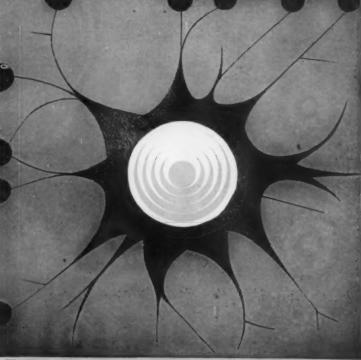
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Geigy, Ardsley, New York



in depression

lights the road to recovery in 80 per cent of cases



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TO 4-60

new
an antihistamine
that is an antihistamine
- not a somnifacient

ACTING

drowsiness (other side effects) rare...relief prompt...toxicity low

Investigators cite this new antihistamine's lack of side effects, its speed of action and its excellent tolerance. Nineteen investigators have treated over 800 patients with ALLERCUR. In 297 recent cases, 91% were side-effect-free. ALLERCUR is supplied in bottles of 100 scored tablets, each containing 20 mg. Clemizole HCl. Average dose is 2 to 4 tablets daily.

when allergies occur
RALLERCUR

(Clemizole HC!)



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Coroner's Corner

A beautiful imported German apothecary jar will be sent to each contributor of an unusual case report.

he body of a 33-year-old Negro woman was brought to the hospital morgue for an autopsy. Several bruises were present on the upper lip, multiple abrasions were seen on the forehead above the eyebrows and two freely bleeding, irregular, lacerations at the outer angle of the left eye attracted special attention. One wound measured 3/8 inch in diameter and could be probed to a depth of 21/2 inch; the tip of the probe could be felt within the mouth indicating the direction of the stab wound from the outer angle of the left eye downward and towards the midline of the palate. The second wound measured 1/16 by 3/16 inch and its depth was 134 inch; the direction was almost horizontal but slanting 34 inch deep toward the midline of the face.

Corresponding to the abrasions and lacerations there were multiple blood effusions within the subcutaneous tissue and the musculature of the head. There were no skull fractures. Over both frontal lobes and the left temporal lobe of the brain there were moderate, recent blood effusions beneath the soft covers. The brain itself was intact. Two other significant findings were severe diffuse pulmonary edema with multiple recent focal blood effusions into the alveoli and a typical stress reaction of the

adrenal glands. Death was apparently due to shock following multiple facial stab wounds.

The woman had been found outside her house lying in the snow. There had been several snowstorms during that January and snow drifts were up to two feet high. A few sunny days between storms caused some of the snow to melt, only to freeze again during the night.

The woman's common-law husband claimed that she had been drunk, that she slipped on the ice and fell on an icicle which pierced her eye. Ignorance failed to prove bliss.

There had been considerable postmortem lividity of the dependent parts indicating that she had been lying on her back and not face down as the man had claimed. The direction of the stab wounds repudiated the man's story. And, lastly, having heard about the famous Shepperd case in Cleveland, the tracts of the wounds were successfully searched for microscopic particles of iron. After the snow had melted the icepick used to inflict the fatal stab wounds was found on the ground behind the house. By that time the man had started on his life term in prison!

O. J. POLLAK, M.D. Dover, Delaware



The role of the husband as a carrier and as a cause of re-infection in vaginal trichomoniasis is well documented.¹⁻⁷

"Until and unless immunization is possible, definite prophylactic measures such as the use of condoms, at least during the course of therapy in the female, have the same importance in the eradication of this disease as the elimination of endogenous extravaginal foci of infections."

ENLIST HIS COOPERATION—SPECIFY RAMSES

the prophylactic with "built-in" sensitivity

Husbands readily cooperate when you recommend RAMSES prophylactics. The exquisite sensibility preserved by this tissue-thin, natural gum-rubber sheath of amazing strength and solid clinical reliability places RAMSES almost out of human awareness. Without imposi-



tion or deprivation for the sake of cure, the routine use of RAMSES with "built-in" sensitivity is readily adopted—even by the husband whose fear of sensation loss is a consideration.

RAMSES is a registered trade-mark of Julius Schmid, Inc.

References: 1. Baum, H. C.: M. Clin. North America 42:263 (Jan.) 1958. 2. Decker, A.: New York J. Med. 57:2237 (July 1) 1957. 3. Giorlando, S. W., and Brandt, M. L.: Am. J. Obst. & Gynec. 76:666 (Sept.) 1958. 4. Karnaky, K. J.: South. M. J. 51:925 (July) 1958. 5. Maeder, E. C.: Journal-Lancet 79:564 (Aug.) 1959. 6. McDonald, J. H.: M. Clin. North America 42:267 (Jan.) 1958. 7. Riba, L. W.: Am. J. Obst. & Gynec. 73:174 (Jan.) 1957.

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wyeth
has provided the physician continuously with

new and better forms of penicillin

NOW Wyeth announces

TABLETS

DARCIL

a new, high-performance penicillin molecule

Synthesized chemically
Remarkably stable in gastric acid
Efficiently absorbed
Predictable blood levels, proportional to dosage
Peak blood levels rapidly induced
Highest oral penicillin blood levels
Highest urinary excretion
Lethal in vitro to many Staph. strains

provides the physician with an added measure of assurance
provides the patient with an added measure of therapeutic effectiveness

DARCII clinically effective

DARCIL (phenethicillin potassium) is more rapidly and more completely absorbed from the gastro-intestinal tract than any other type of penicillin molecule. As a result, tissues are more likely to be supplied with adequate penicillin, despite individual patient-variation in the absorption of drugs. Blood concentrations of DARCIL directly reflect dosage levels, permitting adjustment of dosage to severity of infection.

Many strains of Staph. aureus susceptible

Morigi et al.¹ administered phenethicillin potassium to 47 patients with a variety of bacterial infections caused by penicillin-susceptible organisms. Clinical entities included: acute tonsillitis, acute pharyngitis, otitis media, otitis externa, cellulitis, furunculosis, carbuncle, pyoderma, impetigo, thrombophlebitis, and Vincent's angina. Dosage was 250 mg. q.i.d.; average duration of therapy, 3 to 6 days.

Twenty strains of *Staph. aureus* were isolated from pre-therapy cultures; 19 were highly susceptible to phenethicillin potassium *in vitro*; one was resistant. Seven strains of beta-hemolytic streptococcus were also isolated and found susceptible.

Of the 47 patients treated, 38 were cured, 6 improved, and 3 unresponsive. No evidence of intolerance or allergic phenomena was observed (true also in the 210 human subjects utilized for laboratory studies).

Prompt regression of symptoms

Cronk et al.² report prompt regression of symptoms and disease in all cases of bacterial infections caused by organisms susceptible to penicillin. Successfully treated were 38 patients representing cases of tonsillitis, gingivitis, otitis media, pneumonia, peritonsillar abscess, gonorrhea, cellulitis, conjunctivitis, and acute respiratory disease. The authors conclude that further experience will undoubtedly demonstrate the antibiotic to be highly efficacious in all infections caused by susceptible organisms.

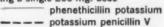
References: 1. Morigi, E.M.E., et al.: Antibiotics Annual 1959-1960, Antibiotica, Inc., New York, N.Y. pp. 127-132. 2. Cronk, G.A., et al.: Ibid., pp. 133-145. 3. Wright, W.: Reported in Morigi, E.M.E., et al.: Ibid., pp. 127-132. 4. Gourevitch, A., et al.: Ibid., pp. 111-118.

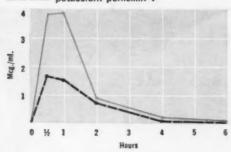
TABLETS

DARCIL

Penicillin-152 Potassium phenethicillin potassium, Wyeth

Average penicillin serum concentrations³ following a single 250-mg. dose

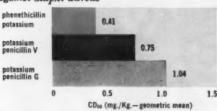




Average penicillin urine concentrations¹ following a single 250-mg. dose

	0-6 Hrz.	6-12 Hrs.	24 Hrs.
phenethicities polessions	30.9%	1.4%	9%
potassium ponicillin V	18.2%	0.2%	0%

Median curative dose⁴ (in animals) of penicillins against *Staph. aureus*



Minimum inhibitory concentrations of penicillins using *Staph. aureus* strains of clinical origin resistant to penicillin

Minimum	inhibitory co	oncentrations,	Mcg./ml.
Staph, aureus	potessiem :	potassium penicillin V	potassium ponicillin G
52-34	0.8	6.2	12.5
52-75	3.1	25	50
WR-188	1.6	12.5	12.5
BRLJ	0.8	1.6	3.1
BRLO	0.8	12.5	25

DARCIL

a new, high-performance penicillin molecule

*Trademark

DARCIL is a new penicillin molecule, designated chemically as potassium a-phenoxyethyl penicillin. It is remarkably stable in acid solutions; is lethal in vitro to clinical isolates of certain strains of staphylococci resistant to other penicillins; has a lower CD₅₀ (median curative dose) against certain organisms than the natural penicillins; and is efficiently absorbed from the gastrointestinal tract, yielding early high penicillin serum levels and urine excretion levels substantially higher than those observed following equivalent oral dosages of penicillin G or V.

DARCIL is active against streptococci (Groups A, B, C, and D), Diplococcus pneumoniae, Neisseria and Staphylococcus aureus, including some strains of that organism which are resistant to other penicillins. It is bactericidal in serum concentrations obtainable on oral administration. As is the case with other penicillins, bacterial resistance develops slowly.

Indications

DARCIL is recommended in the treatment of the following bacterial infections due to penicillin-susceptible organisms:

Respiratory Tract Infections: acute pharyngitis, septic sore throat, tonsillitis, otitis media, laryngitis, cervical adenitis, bronchitis and lobar or bronchopneumonia.

Skin, Soft Tissue and Surgical Infections: erysipelas, cellulitis, lymphangitis, wound infections and pyodermia.

Urinary Tract Infections: gonorrhea, acute and chronic cystitis, pyelonephritis and prostatitis.

Other Infections: scarlet fever and puerperal sepsis.

The clinical utility of DARCIL in the treatment of syphilis, endocarditis, or meningitis has not been established.

Dosage

Recommended Desage: 125 mg. (200,000 units) or 250 mg. (400,000 units) three times daily depending on the severity of the infection. Larger doses of 500 mg. (800,000 units) three times daily or 250 mg. every four hours may be used for more severe infections.

Beta-hemolytic streptococcal infections should be treated for at least ten days to prevent the development of acute rheumatic fever.

Precautions

Allergic reactions to oral penicillin, although rare, are more likely to occur in patients with histories of hay fever, asthma, and those who have previously reacted adversely to penicillin. If the use of penicillin in such patients is imperative and reactions occur, the physician should have available resuccitative drugs such as epinephrine, antihistamines, aminophylline, etc., for intravenous administration, and discontinue further use. Administration of oral penicillin, in rare instances, may provoke acute anaphylaxis, particularly in penicillin-sensitive individuals.

The use of antibiotics occasionally results in the overgrowth of nonsusceptible organisms. If superinfection occurs during therapy, appropriate measures should be taken.

Loose stools have been reported occasionally. Other signs of toxicity are rare.

Supplied

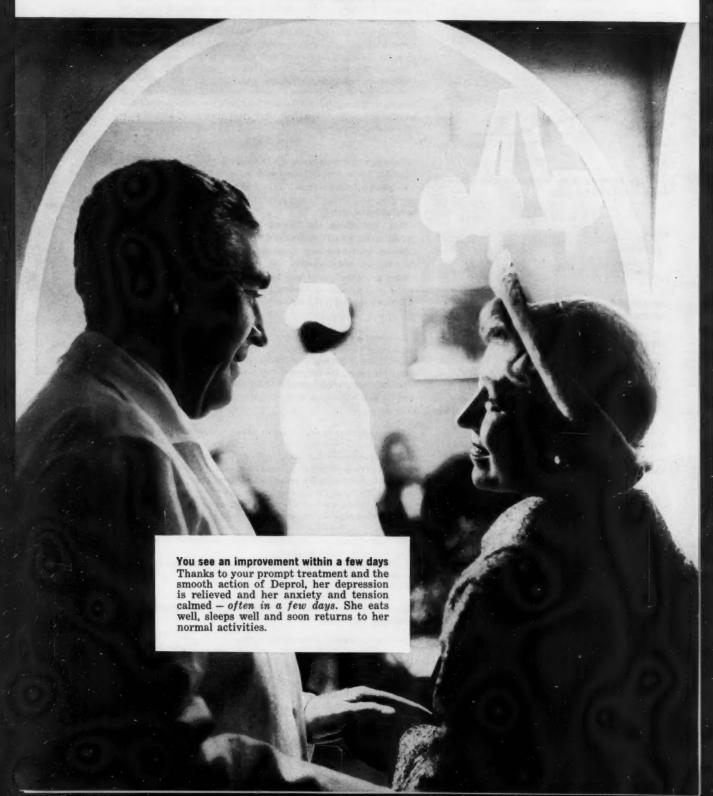
Tablets, scored; each containing 250 mg. (400,000 units) phenethicillin potassium; vials of 36.

Wyeth Laboratories Philadelphia 1, Pa.





Lifts depression...



as it calms anxiety!

Smooth, balanced action lifts depression as it calms anxiety... rapidly and safely

Balances the mood - no "seesaw" effect of amphetamine-barbiturates and energizers. While amphetamines and energizers may stimulate the patient -they often aggravate anxiety and

And although amphetamine-barbiturate combinations may counteract excessive stimulation-they often deepen depression.

In contrast to such "seesaw" effects, Deprol's smooth, balanced action lifts depression as it calms anxiety-both at the same time.

Acts swiftly - the patient often feels better, sleeps better, within a few days. Unlike the delayed action of most other antidepressant drugs, which may take two to six weeks to bring results, Deprol relieves the patient quickly - often within a few days. Thus, the expense to the patient of long-term drug therapy can be avoided.

Acts safely - no danger of liver damage. Deprol does not produce liver damage, hypotension, psychotic reactions or changes in sexual function-frequently reported with other antidepressant drugs.

Bibliography (13 clinical studies, 858 patients): 1. Alexander, L. (35 patients): Chemotherapy of depression - Use of meprobamate combined with benactyzine (2-diethylaminoethyl benzilate) hydrochloride. J.A.M.A. 166:1019, March 1, 1958. 2. Bateman, J. C. and Carlton, H. N. (50 patients): Meprobamate and benactyzine hydrochloride (Deprol) as adjunctive therapy for patients with advanced cancer. Antibiotic Med. & Clin. Therapy 6:648, Nov. 1959. 3. Beerman, H. M. (44 patients): The treatment of depression with meprobamate and benactyzine hydrochloride. Western Med. 1:10, March 1960. 4. Bell, J. L., Tauber, H., Santy, A. and Pulito, F. (77 patients): Treatment of depressive states in office practice. Dis. Nerv. System 20:263, June 1959. **5.** Breitner, C. (31 patients): On mental depressions. Dis. Nerv. System 20:142, (Section Two), May 1959. **6.** Gordon, P. E. (50 patients): Deprol in the treatment of depression. Dis. Nerv. System 21:215, April 1960. **7.** Landman, M. E. (50 patients): Clinical trial of a new antidepressive agent. J. M. Soc. New Jersey. In press, 1960. 8. McClure, C. W., Papas, P. N., Speare, G. S., Palmer, E., Slattery, J. J., Konefal, S. H., Henken, B. S., Wood, C. A. and Ceresia, G. B. (128 patients): Treatment of depression - New technics and therapy. Am. Pract. & Digest Treat. 10:1525, Sept. 1959. 9. Pennington, V. M. (135 patients): Meprobamate-benactyzine (Deprol) in the treatment of chronic brain syndrome, schizophrenia and senility. J. Am. Geriatrics Soc. 7:656, Aug. 1959. 10. Rickels, K. and Ewing, J. H. (35 patients): Deprol in depressive conditions. Dis. Nerv. System 20:364, (Section One), Aug. 1959. 11. Ruchwarger, A. (87 patients): Use of Deprol (meprobamate combined with benactyzine hydrochloride) in the office treatment of depression.

M. Ann. District of Columbia 28:438, Aug. 1959. 12. Settel, E. (52 patients): Treatment of depression in the elderly with a meprobamate-benactyzine hydrochloride combination. Antibiotic Med. & Clin. Therapy 7:28, Jan. 1960. 13. Splitter, S. R. (84 patients): Treatment of the anxious patient in general practice. J. Clin. & Exper. Psychopath. In press, April-June 1960.

'Deprol'

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate. Supplied: Bottles of 50 light-pink, scored tablets. Write for literature and samples.



WALLACE LABORATORIES / New Brunswick, N. J.

Armour Pharmaceutical Company Announces a New Systemic Enzyme Chymoral

AM PLEASED to inform you of the latest development of our Company's research.

To the expanding field of systemic antiinflammatory enzymes we are introducing Chymoral. It is a specially coated tablet specifically designed for intestinal absorption. The activity is supplied by a purified concentration which has specific trypsin and chymotrypsin activity in a ratio of approximately six to one.

During past months, clinical investigators have evaluated Chymoral in a wide range of inflammatory conditions. They have reported to us as well as to the medical journals on the therapeutic response, convenience and safety of this oral form.

Patients have responded very well on a Chymoral dosage schedule of 2 tablets q.i.d. and one tablet q.i.d. for maintenance. Important, too, is the fact that where other therapeutic agents were used there were no incompatibilities.

Chymoral is indicated in a wide range of inflammatory conditions to control inflammation, curtail swelling and curb pain.

If you would care to review some of the published reports on Chymoral we shall be happy to send reprints of these papers to you.

Parent o Hand

Robert A. Hardt President

1. Beck, C.; Levine, A. J.; Davis, O. F., and Horwitz, B.: Clinical Studies with an Oral Anti-inflammatory Enzyme Preparation. Accepted for publication in Clin. Med. (March) 1960. 2. Billow, B. W.; Cabodevilla, A. M.; Stern, A.; Palm, A.; Robinson, M., and Paley, S. S.: Clinical Experiences with an Oral Anti-Inflammatory Enzyme for Intestinal Absorption. Accepted for publication in Southwestern Med. (May) 1960. 3. Teitel, I. H.; Siegel, S. J.; Tendler, J.; Reiser, P., and Harris, S. B.: Clinical Observations with Chymotrypain in 306 Patients. Accepted for publication in Indust, Med. (April) 1960. 4. Clinical Reports to the Medical Dept., Armour Pharmaceutical Company, 1959. 5. Reich, W. J., and Nechtow, M. J.: Scientific Exhibit, Chicago Medical Society (March) 1960. 6. Taub, S. J.: Paper presented Annual Meeting, IIAK Medical Fraternity, Miami, Florida (March) 1960.

@ 1980, A. P. Co.



What's Your Verdict?

Edited by Ann Ledakowich, Member of the Bar of New Jersey

businessman arriving home after a long day felt a cold developing and telephoned a physician thinking that an injection of penicillin might be a "good idea." The physician called at his home that evening and learned that the patient's colds usually wound up in his chest and that on at least two prior occasions he had received penicillin through hypodermic injections in the right buttock. The physician then gave a dose of penicillin by hypodermic injection into the patient's right buttock. Within ten seconds thereafter the patient's right leg became numb, and within one-half hour later he was seized with violent shaking. The patient's buttock became swollen to such an extraordinary size that he could neither sit nor lie down.

The patient was subsequently admitted to the hospital where he remained for two days. He continued under doctor's care for several months. The physician prescribed narcotics to relieve the pain, and sleeping pills which induced three hours of sleep each night.

The insensitivity of the leg subsided in a couple of weeks but was followed by extreme pain in the foot. That pain abated in eight months, but the patient was left with a slight limp in his walk.

In a malpractice trial against the physician, the patient produced expert medical testimony establishing that the cause of his pain was a neuro-vascular demineralization (osteoporosis) of the bones in his foot, and that the condition was a result of sciatic nerve injury. However,



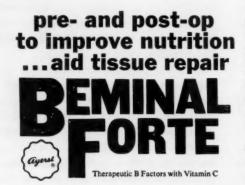
no standard of care was established to be exercised by a physician in administering a hypodermic needle. Nor was any evidence presented of a deviation from that standard by the defendant physician.

It is the patient's contention that medical expert testimony is not necessary in this case because the doctrine of res ipsa loquitur is applicable. This doctrine allows an inference of negligence and places the duty of producing evidence upon the defendant, who has superior knowledge of the causative circumstances. The following conditions must be met for the doctrine to apply: (1) the injury would not ordinarily have occurred except through negligence of the physician; (2) the instrumentality causing the injury was within the exclusive control of the physician.

The trial court dismissed the case for failure to establish negligence. On an appeal, how would you decide? (Answer on page 226a)



"All my surgical patients get an extra lift with 'Beminal' Forte"



A single capsule provides 250 mg. of vitamin C and massive doses of B factors to meet the need when requirements are high and reserves are low. Prescribe "Beminal" Forte pre- and post-operatively, during convalescence, and for patients on special diets to improve the prognosis and accelerate recovery.

Supplied: No. 817 – Bottles of 100 and 1,000 capsules.

Ayerst Laboratories New York 16, N. Y. . Montreal, Canada

6010

anticholinergic KEEPS THE STOMACH FREE OF PAIN

tranquilizer KEEPS THE MIND OFF THE STOMACH



Milpath acts quickly to suppress hypermotility, hypersecretion, pain and spasm, and to allay anxiety and tension with minimal side effects.

> AVAILABLE IN TWO

POTENCIES:

Milpath-400 - Yellow, scored tablets of 400 mg. Miltown (meprobamate) and 25 mg. tridihexethyl chloride. Bottle of 50.

Dosage: 1 tablet t.i.d. at mealtime and 2 at bedtime.

Milpath-200 - Yellow, coated tablets of 200 mg. Miltown (meprobamate) and 25 mg. tridihexethyl chloride. Bottle of 50.

Dosage: 1 or 2 tablets t.i.d. at mealtime and 2 at bedtime.

Miltown + anticholinergic

WALLACE LABORATORIES New Brunswick, N. J.



The first full-range medication for chronic gout and gouty arthritis ...new

provides comprehensive treatment by combining in one convenient dose:

FLEXIN® Zoxazolamine†: the most potent uricosuric able upon request. agent available 1-4

Colchicine: time-tested specific for gout-effective in preventing acute attacks1,5,6

TYLENOL® Acetaminophen: effective, nonirritating analgesic7 which does not interfere with uricosuric action8,9

the triple therapeutic action of TRIURATE provides all these clinical benefits:

- promotes maximum urinary urate excretion
- markedly reduces serum uric acid
- · relieves chronic pain and discomfort
- · lessens frequency and severity of acute attacks
- · facilitates resorption of existing tophi... prevents formation of new deposits
- helps restore mobility
- · maintains effectiveness with minimal side effects

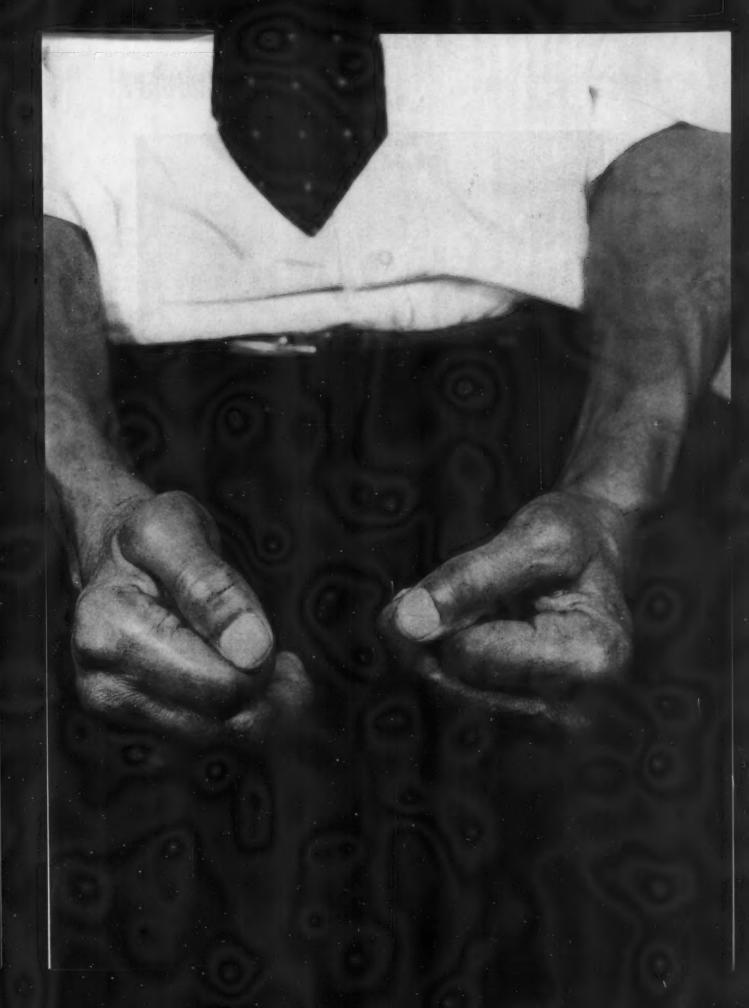
Average Dose: One tablet three times a day after meals. Literature on method of administration and dosage is avail-

Supplied: TRIURATE is available as beige, scored tablets, imprinted McNEIL, bottles of 50.

(1) Boland, E. W.: World-Wide Abstracts 3:11, 1960. (2) Kolodny, A. L.: J. Chron. Dis. 11:64, 1960. (3) Talbott, J. H.: Arth. & Rheumat. 2:182, 1959. (4) Burns, J. J.; Yü, T. F.; Berger, L., and Gutman, A. B.: Am. J. Med. 25:401, 1958. (5) Beckman, H.: Pharmacology in Clinical Practice, Philadelphia. Saunders, 1952, pp. 515-516. (6) Talbott, J. H .: J. Bone & Joint Surg. 40-A:994, 1958. (7) Batterman, R. C., and Grossman, A.: J.A.M.A. 159: 1619, 1955. (8) Connor, T. B.; Carey, T. N.; Davis, T., and Lovice, H.: J. Clin. Invest. 38:997, 1959. (9) Reed, E. B.: Unpublished data.

†U.S. Patent No. 2,890,985

MCNEIL LABORATORIES, INC . PHILADELPHIA 32, PA. MCNEIL





Equilibrium for the epileptic

Before an epileptic child starts school, better control of seizures and the emotional support of "physician-educated" parents can help him to develop normal interpersonal relationships.

Mebaral is highly effective for most types of seizures, especially major motor seizures in children. Because it does not produce sedative daze, it does not tend to lower learning capacity.

Mebaral is unsurpassed in safety; regardless of the type of epilepsy, it is one of the best tolerated and "... least upsetting of all forms of therapy." I Even when Mebaral is used year after year, toxic reactions or ill effects are rare.

MEBROIN®, a synergistic combination of Mebaral and diphenylhydantoin, provides maximal control of seizures with minimal toxicity. Side effects are infrequent. Each relatively tasteless tablet contains 90 mg. of Mebaral and 60 mg. of diphenylhydantoin.

Mebaral dosage: Children under 5 years, from $\frac{1}{4}$ to $\frac{1}{2}$ grain three or four times daily; over 5 years, from $\frac{1}{2}$ to 1 grain three or four times daily. Adults, from 6 to 9 grains daily.

Mebroin dosage: Children under 6 years, ½ tablet once or twice daily; over 6 years, 1 tablet two or three times daily. Adults, 1 or 2 tablets three times daily (average dosage).

For epilepsy at any age

MEBARAL

How Supplied: Mebaral tasteless tablets of 200 mg. (3 grains), 100 mg, $(1\frac{1}{2} \text{ grains})$, 50 mg, $(3^{\prime} \text{ grain})$, and 32 mg, $(\frac{1}{2} \text{ grain})$. Bottles of 100 Mebroin virtually tasteless tablets. Bottles of 100 tablets.

1. Robertson, E. G.: Postgrad. Med. 25:31, Jan., 1959.

MEBARAL (BRAND OF MEPHOBARBITAL) AND MEBROIN, TRADEMARKS REG. U. B. PAT. OFF.

Winthrop LABORATORIES New York 18, N. Y.

Preludin°

hydrochloride

Through the potent appetitesuppressant action of Preludin, the success of anti-obesity treatment becomes more assured-adherence to diet becomes easier-discomfort from side reactions is unlikely.

In Simple Obesity Preludin produces 2 to 5 times the weight loss achievable by dietary instruction alone.1,2

In Pregnancy Weight gain is kept within bounds, without danger to either mother or fetus.3

In Diabetes Insulin requirements are not increased; they may even decrease as weight is lost.4

In Hypertension Preludin is well tolerated and blood pressure may even fall as weight is reduced.1

Patients taking Preludin usually experience a mild elevation of mood conducive to an optimistic and cooperative attitude, thereby counteracting the lassitude otherwise resulting from a reduced caloric intake. Thus, consistent weight loss over a prolonged period becomes more assured.

Preludin® Endurets, T.M. brand of phenmetrazine hydrochloride: prolonged-action tablets of 75 mg. for once daily administration; and scored, square, pink tablets of 25 mg for b.i.d. or t.i.d. administration.

Under license from C. H. Boehringer Sohn,

Onder Reins (101) C. H. Boeninger Sonn, Ingelheim.
References:
(1) Barnes, R. H.: J. A. M. A. 166:898, 1958.
(2) Ressler, C.: J. A. M. A. 165:135, 1957.
(3) Birnberg, C. H., and Abitbol, M. M.: Obst. & Gyner. 11:463, 1958. (4) Robillard, R.:
Canad. M. A. J. 76:938, 1957.

Geigy, Ardsley, New York



whether obesity is simple or complicated



Geigy

"Because Caroid and Bile Salts Tablets are not harsh, but act gently to produce a normal bowel movement, I prefer them for my 'over 40' patients."



Caroid & Bile Salts Tablets

The combined action of the principal ingredients in Caroid and Bile Salts Tablets provides 3-way, physiologic relief of constipation. Caroid® — potent proteolytic enzyme for improved protein digestion. Bile salts — choleretic for treatment of biliary stasis; hydrotropic for soft, well-formed stools.

Stimulaxant — to improve smooth muscle tone, restore regularity.

Dosage: 1 or 2 Caroid and Bile Salts Tablets should be taken with at least 1 glass of water about 2 hours after breakfast and at bedtime.

Samples on Request.

American Ferment Co., Inc., 1450 Broadway, New York 18, N. Y.



there's no juice like citrus juice

As a high-potency source of vitamin C, citrus juice—fresh, frozen, or canned—is unmatched for convenience and economy. The table below shows amounts† of other fruit juices required to supply the 100 mg.* of vitamin C in one glass (7-9 fl. oz.) of citrus juice.

citrus	1 glass
apple	50 glasses
grape	9 glasses
pineapple	3-4 glasses
prune	50 glasses



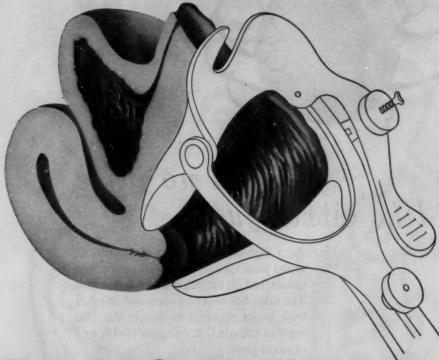
†Data calculated from: Watt, B. K. et al., U.S. Dept. Agric. Handbook No. 8, 1950; and Burger, M. et al. Agr. & Food Chem. 4:418, 1956.

ARABAMA A

*This is the peak of the Recommended Daily Allowances for adolescence or pregnancy; 150 mg. during lactation; 70-75 mg. for normal adults.

ORANGES GRAPEFRUIT TANGERINES Floridalitrus

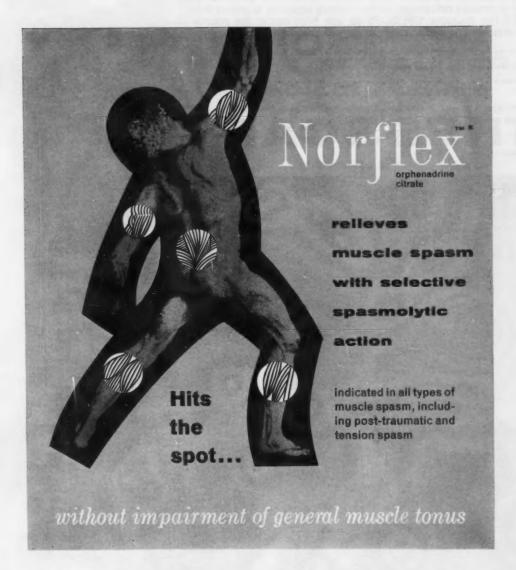
FLORIDA CITRUS COMMISSION · Lakeland, Florida



Triple Sulfa Cream

- · in mixed vaginal infections
- against secondary invaders in trichomoniasis
- · in postpartum care
- after vaginal surgery





Restores mobility quickly and relieves associated pain by prompt relaxation of only the muscle in spasm. Prolonged action and potency provide all-day and allnight benefits...permitting uninterrupted sleep...facilitating rehabilitation.



standard dosage

for all adults regardless of age, sex, or weight: 1 tablet (100 mg.) b.i.d. easily remembered... offering better patient cooperation.



Vorflex for prompt, safe spasmolytic action

*Trademark U.S. Patent No. 2,567,351. Other patents pending.

Northridge, California



Therapeutic vitamins in the "therapeutic" jar

High potency water-soluble vitamins as contained in STRESSCAPS may solve the complicating nutritional problem in arthritics. As increased metabolic needs are intensified by established or progressive deficiencies, multiple vitamins adjunctive to primary therapy are justified.\(^1\).\(^2\) The decorative STRESSCAPS jar also helps resolve the problem of adherence to prescribed regimen...\(^1\) reminding the patient of his one-capsule-daily.

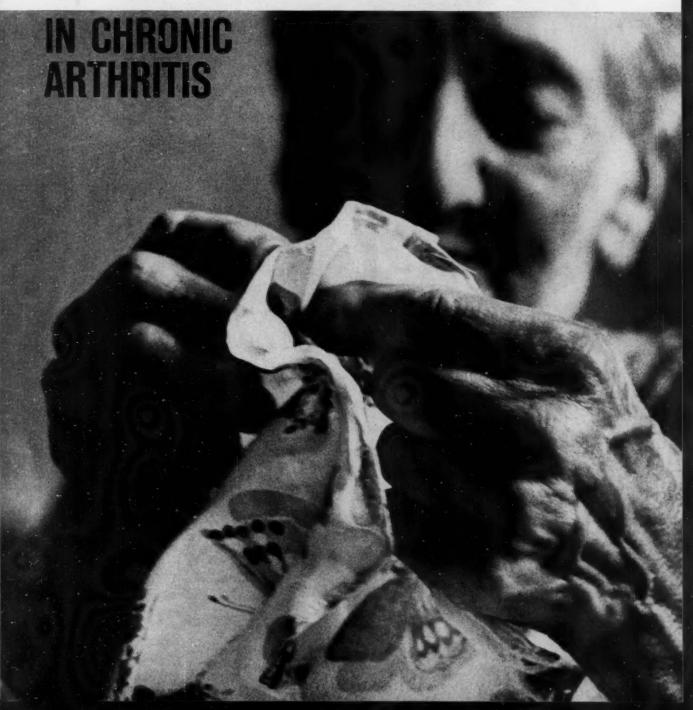
Each capsule contains: Thiamine Mononitrate (B_1) 10 mg., Riboflavin (B_2) 10 mg., Niacinamide 100 mg., Ascorbic Acid (C) 300 mg., Pyridoxine HCl (B_d) 2 mg., Vitamin B_{12} 4 mcgm., Folic Acid 1.5 mg., Calcium Pantothenate 20 mg., Vitamin K (Menadione) 2 mg. Average dose: 1-2 capsules daily.

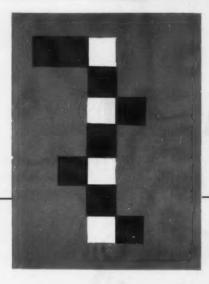
1. Robinson, W.D. Report to A.M.A. Council on Foods and Nutrition, <u>J.A.M.A.</u> 166:263 (Jan. 18) 1988. 2. Spies, T.D.: <u>J.A.M.A.</u> 167:478 (June 2) 1988.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

STRESSCAPS







Medical Teasers

A challenging crossword puzzle for the physician (Solution on page 218a)

ACROSS

- Palm of the hand or sole of the foot
 Was in debt
- 9. Relating to a structure resembling a veil
- 14. Harem rooms
- 15. Wax
- 16. Dropsy
- 17. Mite transmitting spotted-fever 18. Generalized Cancer
- 20. Not in the office 21. Source of heat
- 22. A tuberculin apparently corresponding to Denys's bouillon filtre
- 23. An Anglo-Saxon letter 24. Tobacco user
- 26. Hang, without sentence by court
- 28. Bursa
- 29. Liquid insoluble in water
- 30. An eminence or projection
 34. Commit depredations
- 36. Grampus 37. Derive
- 38. Possessive pronoun
- 39. Asthma-weed
- 41. Be ill
- 42. Moist, hot compresses 44. And not 45. Sole

- 46. Plant used as a diuretic and cathartic
- 47. A king of Judah 48. Hydrophobic
- 49. In the time past
- 54. An organized body
- of physicians (abbr.)
- 57. Avena
- 58. A cereal grain 59. Corded fabric
- 60. Inflammation of the membranes of the brain
- and spinal cord 63. Skin opening
- 64. Japanese physician who developed a method of resuscitation in asphyxia
- 65. Bird's home

- 20 35 52 53
- 66. Peculiar sensation experienced in epilepsy 67. Relating to birth
- 68. Poems
- 69. Former Russian ruler
 - DOWN
- I. Former dwellers in
- Nicaragua
- Opprobrium
- 3. Whey

- 4. Question
 5. Happen
 6. Take from the breast
- 7. Go astray
- 8. Finger or toe (Gr.)
- 9. Largest vein 10. One of a Negro, tribe in southern Nigeria
- majesty; a crime against soverign power 11. —

- 12. Among (poetic) 13. Skin eruption 19. Charged atom

- 21. Dry, as wine
 25. With Dr. Jenner's, his
 name is given to a
 quantitative test for
- serum phosphatase
 26. Needed for the lawful practice of medicine
 27. Mercuric oxide

- 29. The eyeball (poetic)
 31. Relating to glanders
 32. Wicked
 33. Depend
 34. Pin inserted in root canal of tooth to at-
- tach artificial crown 35. The leaves of garden
- 36. Hawaiian birds (hyphen.)

- 37. Norse goddess of healing 39. Of a diseased region
- 40. Commonest Presenta-tion (Obstet. Abbr.)
 43. Fluid product of inflammation
- 45. Rowing implement 47. Ray (comb. form)
 48. Girl's name
 50. Scold persistently
 51. Abnormal sacs
 52. Saw (Latin)

- 53. Pointed weapon
- 54. Egyptian god 55. Great or large (prefix) 56. Morphology (Abbr.)
- 58. Extend upward 61. Greenland Eskimo
- 62. Spread for drying 63. Mike's companion in humor

'PERAZIL'



long-acting antihistamine

USES: 'Perazil' relieves the symptoms of sneezing, "incessant" itching, inflamed eyes, rhinorrhea, itching eyes, nose and throat, associated with:

Hay Fever • Pollenosis • Pruritus • Urticaria • Vasomotor Rhinitis • Allergic Dermatitis • Drug Sensitivity

ADVANTAGES: 'Perazil' is both prompt and prolonged in effect, providing symptomatic relief lasting 12 to 24 hours from a single dose.

PRECAUTION: When drowsiness does occur it is generally mild and the usual precautions should be observed. No toxic effects related to either the blood-forming organs or the cardiovascular system are produced.

DOSAGE: Adults and children over 8 years, 50 mg. once or twice daily as required. The dose may be increased in severe cases.

Children from 2 to 8 years, 25 mg. (one sugar-coated tablet) once daily.

Infants up to 2 years, $12\frac{1}{2}$ mg. (one quarter of a 50 mg. tablet) crushed and mixed with a spoonful of jam or syrup.

SUPPLIED: Tablets of 25 mg., sugar-coated, bottles of 100 and 1000; 50 mg., scored, bottles of 100 and 1000.

PERAZIL'® brand Chlorcyclizine Hydrochloride



BURROUGHS WELLCOME & CO. (U. S. A.) INC., Tuckahoe, New York

Why Clinical Judgment Often Dictates Altafur for Peroral, Systemic Therapy of Pyodermas

Gratifying Therapeutic Response

ALTAFUR was found "highly satisfactory in most of the primary and secondary bacterial dermatoses treated to date," including "pyodermas... caused by antibiotic resistant strains of staphylococci." In a nationwide survey there were 94% satisfactory results (cured or improved) among 159 patients treated with ALTAFUR for pyodermas.

Virtually Uniform in vitro Susceptibility of Staphylococcus aureus

99.5% of isolates (214 of 215) from patients with staphylococcal infections—including many antibiotic-resistant strains—proved sensitive in vitro to ALTAFUR in tests conducted across the nation. 399.7% of staphylococcal isolates (334 of 335) at a large general hospital—including many antibiotic-resistant strains—proved sensitive in vitro to ALTAFUR.

Wide, Stable Antimicrobial Spectrum

"Because of its relationship to previously developed nitrofurans, it is anticipated that [ALTAFUR] will retain its original spectrum after longstanding

clinical usage." Development of significant bacterial resistance to ALTAFUR has not been encountered to date.

Minimal Side Effects

Side effects are easily avoided or minimized by these simple precautions: 1) alcohol should not be ingested in any form, medicinal or beverage, during ALTAFUR therapy and for one week thereafter 2) each dose should be taken with or just after meals, and with food or milk at bedtime (to reduce the likelihood of occasional nausea and emesis).

1. Weiner, A. L.: Paper presented at the Conference on Recent Advances in the Treatment of Chronic Dermatoses, University of Cincinnati (Ohio), Nov. 5, 1959. 2. Compiled by the Medical Department, Eaton Laboratories, from case histories received. 3. Christenson, P. J., and Tracy, C. H.: Current Therapeutic Research 2:22, 1960. 4. Glas, W. W., and Britt, E. M.: Proceedings of the Detroit Symposium on Antibacterial Therapy, Michigan and Wayne County Academies of General Practice, Detroit, Sept. 12, 1959, p. 14. 5. Leming, B. H., Jr.: Ibid., p. 22. 6. Investigators' reports to the Medical Department, Eaton Laboratories.

Tablets of 250 mg. (adult)
and 50 mg. (pediatric)
bottles of 20 and 100

NITROFURANS a unique class of antimicrobials
EATON LABORATORIES, NORWICE, NEW YORK

INCREASED LIFE EXPECTANCY FOR HYPERTENSIVES

"Life expectancy seems to be the one criterion that is most reliable and least questioned as a method of evaluating treatment for patients with elevated blood pressure." I "It is evident that effective therapy of hypertension will prolong the life of the patient by preventing the dreaded complications of this disease in the brain, the heart and the kidneys." "There is no doubt of the prolongation of life in group 3 and 4 (Keith-Wagener-Barker) by adequate antihypertensive treatment. Some authorities report a 50 per cent, five year survival ratio for treated patients with malignant hypertension as against a 1 per cent survival ratio for untreated patients."

Evaluation based on life expectancy is extremely difficult because of the peril of maintaining an untreated control group.¹ The doctor, however, can evaluate the symptoms related to the elevated blood pressure.... We know that retinopathy may improve, the heart may be reduced in size, the electrocardiogram may improve and in favorable cases the blood urea nitrogen level may fall.² These are reasonably objective criteria on which to base one's evaluation of treatment.¹

On the succeeding page is evidence that Unitensen included in any therapeutic regimen may improve the results in hypertension as measured by a regression of objective clinical changes in a substantial proportion of the patients treated.

Waldman, S., and Pelner, L.: Am. Pract. & Digest. Treat. 10:1139, 1959.
 Waldman, S., and Pelner, L.: Am. Pract. & Digest. Treat. 10:1139, 1959.
 Cohen, B. M.: paper presented at A.M.A. Convention, June, 1958.
 Cohen, B. M.: Am. J. Cardiology 1:748, 1958.
 Kirkendall, W. J.: J. Iowa M. Soc. 47:300, 1957.
 Cherny, W. B., et al.: Obst. & Gynec. 9:515, 1957.
 Raber, P. A.: Illinois M. J. 108:171, 1955.
 McCall, M. L., et al.: Obst. & Gynec. 6:297, 1955.
 Tinnerly, F. A.: Am. J. Med. 17:629, 1954.

Unlike diuretics or ganglionic blocking agents, Unitensen lowers blood pressure through widespread vasorelaxation. Normal vasomotor responses are not altered, and there is no venous pooling with resulting postural hypotension.3-5 Through alleviation of cerebral vasospasm, Unitensen promotes cerebral blood flow and oxygen utilization.6-8 Furthermore, Unitensen increases cardiac efficiency, improves renal function and tends to arrest the progress of vascular damage.3,4,10

Progress of Objective and Subjective Symptoms in Grades III and IV Hypertension Following Treatment with Unitensen and Unitensen-R

Observations in Patients* Treated up to 2 Years

Observations in Patients' Treated up to 31/2 Years

The Course of Subjective Symptoms

Symptom	Number**	Improved	% Improved
Headache	27	21	77.7
Palpitation	20	13	65.0
Angina	15	9	60.0
Dyspnea	17	8	47.0

Number**	Improved	% Improved
43	38	0.88
29	19	65.5
21	16	76.0
27	14	51.0

Objective Changes Following Treatment

Finding	Number**	Improved	% Improved
Funduscopic Changes	41	24	58.5
Enlarged Heart	20	13	65.0
Abnormal EC	G 37	10	27.0
Proteinuria	31	12	38.7
Nitrogen Retention	17	6	35.2

Number**	Improved	% Improved
59	38	66.0
35	23	65.7
45	25	55.5
43	27	62.7
28	10	35.7

Left hand charts from Clinical Exhibit "The Ambulatory Patient with Hypertension" presented AMA Convention, San Francisco, June 22-27, 1958, by B. M. Cohen, M.D.

*All patients in this study were initially classified as Smithwick

**Expressed as the number of patients exhibiting the symptom recorded.

Right hand charts include patients previously reported who had been continuously maintained on Unitensen and Unitensen-R, plus additional patients later added to the study. From Clinical Exhibit "The Office Diagnosis and Treatment of the Patient with Hypertension" presented American Academy of General Practice, Indianapolis, March 18-19, 1959, by B. M. Cohen, M.D.

Each tablet contains: Cryptenamine (tannates) 2.0 mg.

UNITENSEN-PHEN

Each tablet contains: Cryptenamine (tannates) 1.0 mg., Phenobarbital 15 mg.

UNITENSEN-R

Each tablet contains: Cryptenamine (tannates) 1.0 mg., Reserpine 0.1 mg.

Each cc. contains: 2.0 mg. cryptenamine (acetates) in isotonic saline

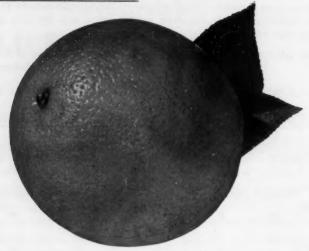
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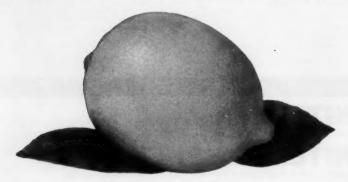
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AFTER HOURS

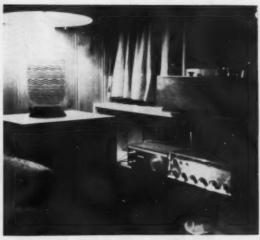
Photographs with brief description of your hobby will be welcomed. A conversation-piece desk ornament . . . an imported, wooden (handcarved) physician figurine . . . will be sent for each accepted contribution.

For complete relaxation," says
Dr. Andrew Furey of New York City, "I have
found nothing to compare with the pleasures of
hi-fi. If you like good music, this hobby is a
natural for you."

Dr. Furey got his first hi-fi system a few years ago. "This was of course a monaural setup. It consisted of a turntable, pre-amp, amplifier, tuner and speaker system. It worked very well, and both my wife and I enjoyed it very much."

But then along came stereo with its promise of even richer audio experiences. "To convert or not to convert—that was the question. But having been 'hooked' by the pleasures that good quality sound can afford, I really didn't hesitate very long. I added another speaker system, matching my original one exactly, and got a stereo preamplifier-amplifier combination. I also had to make some changes in the turntable."

"But it was worth it. When handled right, stereo provides a much fuller, richer sound than monaural reproduction. The difference is truly amazing. Even my wife, who first grumbled at having to rearrange our living room furniture to make room for the second speaker enclosure, says stereo was worth the bother."



Two views of Dr. Furey's stereo system. Close-up shows turntable, preamplifier-amplifier, FM tuner and the right channel speaker enclosure. The two speakers are placed about seven feet apart to insure a good stereo effect.





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all of these patients have anxiety symptoms;













*but half need an antidepressant, not a

depression-a common problem in office practice...

"It is generally acknowledged that at least 40 to 50 per cent of the patients seen in private practice have emotional problems and that true depressions or depressive equivalents are found in more than half of these." Cooper, J. H.: J. Am. M. Women's A. 14:988, 1959

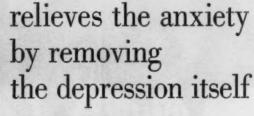
anxiety often "masks" underlying depression...

"Although ataractics have a definite place in therapeutics, their use in depressed states is limited, and in many cases even contraindicated. A large number of patients with psychogenic disorders are given ataractics for the relief of anxiety symptoms. Since the anxiety is actually due to depression, the response, if any, is transient and occasionally the patient may become worse...." Hobbs, L. F.: Virginia M. Month. 86:692, 1959

IN DEPRESSION AND

the common problems basically unresponsive to tranquilizers

brand of phenelzine dihydrogen sulfate





dosage: One tablet three times a day.

supplied: Orange-coated tablets, each containing 15 mg. of phenylethylhydrazine present as the dihydrogen sulfate. Bottles of 100.

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Phenaphen with Codeine Phosphate ¼ gr.



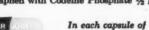
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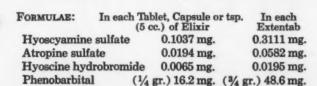
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- In 1164 patients with anxiety and anxiety-induced fatigue or depression, Permitil, administered in small daily doses of 0.5 mg. to 1 mg., produced significant improvement in 90%.²
- Permitil is virtually free from side effects at recommended dosage levels.
- Patients become calm without being drowsy and normal drive is restored.
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How to prescribe Permittl: The lowest dose of Permittl that will produce the desired clinical effect should be used. The recommended dose for most adults is one 0.25 mg. tablet twice a day (taken morning and afternoon). Increase to two 0.25 mg. tablets twice a day if required. Total daily dosage in excess of 1 mg. should be employed only in patients with relatively severe symptoms which are uncontrolled at lower dosage. In such patients, the total daily dose may be increased to a maximum of 2 mg., given in divided amounts. Complete information concerning the use of Permittl is available on request.

SUPPLIED: Tablets, 0.25 mg., bottles of 50 and 500.

REFERENCES: 1. Ayd, F. J., Jr.: Current Therapeutic Research 1:41 (Oct.) 1959.

2. Recent compilation of case reports received by the Medical Department, White Laboratories, Inc.



PERMITIL



a mustache is to wear on Halloween



dogs are to kiss people



a face is something to have on the front of your head



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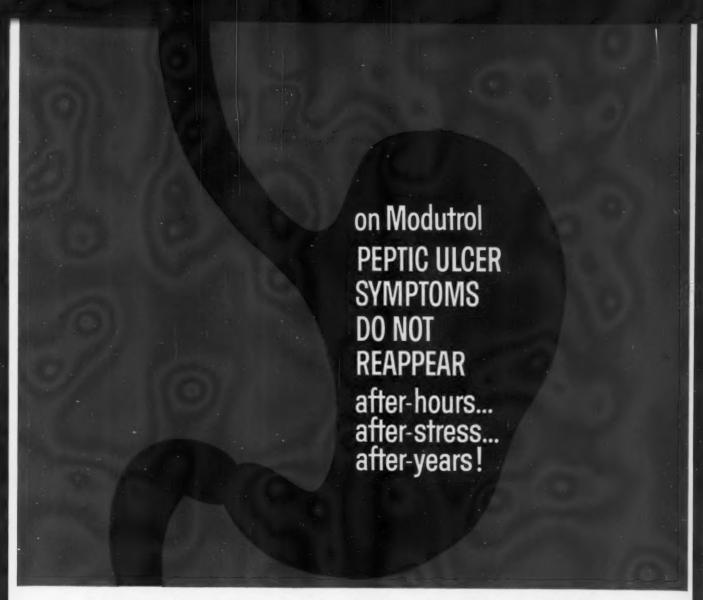
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DOSAGE: One tablet 3 or 4 times daily.

SUPPLIED: Bottles of 50 and 100 tablets.

CONTRAINDICATIONS: Contraindicated in glaucoma because of its anticholinergic components.

 Rosenblum, L. A.: Report, Symposium on Peptic Ulcer, University of Vermont School of Medicine, September 24, 1959. Also available: Sycotrol tablets \$ mg. Bottles of 100 tablets.



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Psycho - physiologic Management

When the Target Organ of Fear-anxieties is the G.I. Tract and Peptic Ulcer Results.



Letters to the Editor

This department is offered as an Open Forum for the discussion of topical medical issues. All letters must be signed. However, to protect the identity of writers who are invited to comment on controversial subjects, names will be omitted when requested.

Medicine at the Crossroads

The entire issue of the March 7, 1960, A.M.A. News was devoted to the Forand Bill. This Bill seems to have touched off a series of events leading to the fear of socialized medicine on the part of the medical profession. Labor and the government are in favor of the passage of the Bill. The doctors are literally afraid of it because of the implication of socialization. The public does not know what it is all about and has no say in the matter except through labor spokesmen. The big fear on the part of the physicians is that the extension of the social security act by forced deductions from wages for health and the regulations regarding health by the government will begin to control medical practice. Thus medicine is at the crossroads. If the Bill is passed private practice will begin to fly out of the window. If the Bill is defeated, private medical practice is temporarily saved until someone in government comes up with another scheme. The medical profession has come up with nothing concrete in order to help solve the problem of the age group over sixty-five. One group in medicine suggests that physicians reduce their fees for the oldsters. Another group suggests that it is not necessary to reduce fees since the majority of oldsters can pay their own way from savings, social security, children, etc. They quote surveys and statistics to prove their thesis. Both suggestions to my mind are inadequate. Therefore, I have evolved the following scheme which, I feel, will satisfy, physicians, labor, government, and the public.

The feature of the social security act which is one of the controversial points, namely, an additional tax for health coverage, can be used to the physicians and the public's advantage. It can also be used to get the government "off the hook" as far as a large expenditure of money to administer the Bill is concerned. Thus the latter feature will satisfy the politicians, since money is hard to get by. Thus all concerned, labor, doctors, etc. will be happy.

Complete medical, surgical and hospital coverage costs roughly \$100-\$125 per year, per couple, according to the United Medical Service plan in Metropolitan New York City. Complete coverage on \$2500-\$4000 (UMS) contracts means 30 office visits per year per person, 21 days free hospitalization, 180 days at half the rate, surgery in home, office and hospital, pathology and radiology in the doctor's office. In Metropolitan New York City, this costs \$60.24 on an individual contract and \$174 on a family contract. No contract is written for a husband and wife alone. However, it can be written and will cost approximately between \$100-\$125 per contract year. Comparable figures are found in other "Shield" plans in other sections of the country.

The laboring years of an individual are roughly between the ages of twenty to sixty-five or forty-five years. Our longevity is approximately three score and ten or seventy years. At sixty-five years of age, a person is expected to survive only five more years. For the sake of argument let us grant a longevity of seven to ten years beyond age sixty-five. Thus about \$700-\$1000 would be needed for complete health coverage, according to scheme outlined above, for a husband and wife from age sixty-five until their death. If the working head of a

family would put aside approximately \$15-\$20 a year or about 25 to 40 cents per week, for health coverage, after age sixty-five, during his work lifetime the amount saved would approximately cover the amount needed for full UMS coverage until their death. This amount could easily be taken out of a person's weekly wage as part of his social security deduction. On an average salary of \$3000 per year this would amount to a deduction of about one percent or \$4 per quarter. With accumulated interest the yearly amount would decrease the longer one worked.

Assuming this scheme were adopted, how would it work? After age sixty-five, the government would use the money collected to purchase yearly the best prevailing local UMS policy until death of both husband and wife or of an individual who was unmarried. This policy should give complete health coverage as outlined above. The patient would have free choice of physician for his medical, surgical and hospital needs, as indicated. Thus the government would be out of the medical business and socialization of medicine would be no concern of the medical profession. Secondly, the government would not be saddled with the administration of such a scheme. The "Shield" plans who already have the administrative set up would continue to run their plans as always except for increased business with its attendant necessary increase in personnel to administer same. The labor unions would be satisfied because their people would have adequate coverage at no cost to them. The public would be satisfied because they would have free choice of physician and adequate medical coverage. The politicians would be satisfied because they got "off the hook" from a controversial problem. The doctors would have a potential increase in patients from a group who are potentially clinic material. Besides to satisfy the policy of the A.M.A. to reduce fees for the group over sixty-five, physicians could accept the UMS fee as full payment.

The cost to the government would probably be far less than it would be if the Forand Bill or similar type bill would be passed. If the husband dies before the wife or vice versa, the difference between the cost of a UMS policy for two over that for one could be disbursed as extra money yearly to the remaining survivor or could be used as described below.

For those people, who because of illness, apply for social security before age sixty-five, the same process used at present to determine eligibility would be in force. Here again, those under sixty-five who are eligible for social security benefits would have health coverage insurance bought by the government as described above. Money not used up for health coverage because of early death of people over sixty-five could be utilized for the group under sixty-five. Any additional sums needed to make up the difference would be supplied by the government, from special funds. The amount of money thus spent would probably be far less than the cost of the administration of a program envisaged by the Forand Bill. One could argue that at the onset of the above program, the cost to the government would be very great because of insufficient social security funds. I can assure you the cost would be far less than it would under the Forand Bill.

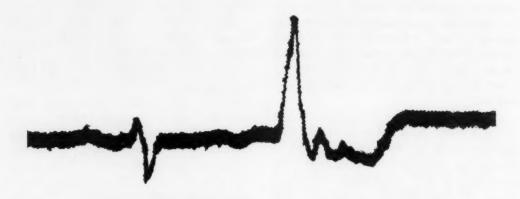
This scheme could also be used by local departments of welfare to buy medical care for their clients on their welfare roles. Here again it would probably be much cheaper than having a panel of physicians and the administrative set up. Furthermore, it would be far more satisfying to the patients.

Another feature of the aforementioned scheme is that the oldster would not lose his dignity. He would not have to depend on children, welfare agencies, governmental group, etc. to see to his medical needs. Emotionally this would be very satisfying to him. With his coverage he could be accepted anywhere for the best in medical care.

The above scheme is merely an outline and suggestion for solving a knotty problem. The finer details have to be worked out. Its simplicity, to my mind should make it easy to accept.

Medicine is really at the crossroads. The above scheme should help medicine get past the crossroad easily.

MAXWELL SPRING, M.D., F.A.C.P. Associate visiting physician: The Bronx Hospital, Misericordia Hospital, City Hospital at Elmhurst.



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References: 1. Zapata-Diaz, J., et al.: Am. Heart J. 43:854, 1952. 2. Modell, W.: In Drugs of Choice, C.V. Mosby Co., St. Louis, 1958, p. 454.

3. Kayden, H. J., et al.: Mod. Concepts Cardiovasc. Dis. 20:100. 1951. 4. Miller, H., et al.: J.A.M.A. 146:1004, 1951.



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Who Is This Doctor?

Identify the famous physician from clues in this brief biography

He was born in Cardross, Scotland, in 1896, and is now living in the United States. After graduating from Dunbarton Academy, he decided to make medicine his career, and entered Glasgow University in 1914. His studies were interrupted in 1916 by World War I and he served as surgeon sublicutenant in the Royal Navy Volunteer Reserve.

He finished his studies in 1919 and made a trip to India that year as ship's surgeon on a liner. In 1921 he married Agnes Mary Gibson, also a physician and a graduate of Glasgow University.

After four years of practice in South Wales and a year of study of pulmonary disabilities in the coal fields for the Ministry of Mines he moved to London. There he entered private practice in the West End. He has a D.P.H. degree from London University and is a member of the Royal College of Physicians.

In 1930, poor health forced a convalescent vacation in the West Highlands of Scotland. This gave him the opportunity he had long wanted to try to write a novel. At the end of three months the novel—a quarter of a million words—was finished, mailed to a publisher and accepted immediately. It was an instantaneous success, translated into five languages and favorably compared by critics with the work of Dickens, Hardy and Balzac.

From 1931 to the present he has been writing best sellers and near best sellers and is considered one of the most popular and distinguished novelists of our times. His first novel, *Hatters Castle*, was followed by *Three Loves, Grand Canary*, and *The Stars Look Down*.

His fifth novel, *The Citadel* published in 1937, deals with the life of a doctor as does *Shannon's Way*, published in 1948. His autobiographical *Adventures in Two Worlds* deals with his two careers, medicine and literature.

Other titles would include The Keys Of The Kingdom, The Green Years and The Spanish Gardener.

From 1941 to 1945 he was in the United States working for the British Ministry of Information. He has since, with his wife and family, taken up residence in the United States, making his home in Illinois. Can you name this doctor? *Answer on page 226a*.



on the spot coverage

Athlete's foot is caused by fungi invading the horny, keratinized layers of the skin that are not reached by the normal blood supply. Desenex applied topically to superficial fungous infections brings the antifungal undecylenic acid and zinc undecylenate into direct contact with the fungi. Hundreds of thousands of cures in athlete's foot have resulted from topical treatment with Desenex — proved to be among the least irritating and best tolerated of all potent fungicidal agents. Pennies per treatment — Desenex Ointment may be applied liberally to both feet every night for a week and a half from a single tube.

ointment & powder & solution

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IN <u>ORAL</u> CONTROL OF PAIN

ACTS FASTER—usually within 5-15 minutes LASTS LONGER—usually 6 hours or more. MORE THOROUGH RELIEF — permits uninterrupted sleep through the night. RARELY CONSTIPATES — excellent for chronic or bedridden patients.

AVERAGE ADULT DOSE: 1 tablet every 6 hours. May be habit-forming. Federal law permits oral prescription.

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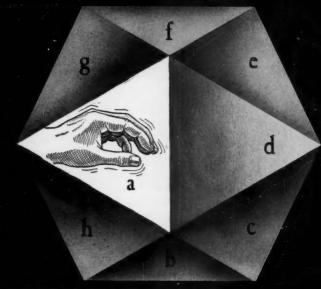
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DISIPAL

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Minimal side reactions

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No known organic contraindications

- a Lessens rigidity and tremor
- b Energizes against fatigue, adynamia and akinesia
- c An effective euphoriant
- d Thoroughly compatible with other antiparkinsonism medications
- e Highly selective action
- f Potent action against sialorrhea
- g Counteracts diaphoresis, oculogyria and blepharospasm
- h Well tolerated—even in presence of glaucoma

Dosage: usually 1 tablet (50 mg.) t.i.d. When used in combination, dosage should be correspondingly reduced.



Bibliography and file card available on request

* Trademerk of Brocades-Stheaman & Pharmacia, U.S. Patent No. 2,567,351. Other Patents Pending.

ANOTHER NOTCH FOR AMPLUS IMPROVED

DANDWETAMINE A ATARAY A VITAMING AND MINERALS

(AND SHE'S LOSING NOTHING BUT WEIGHT)

- She's not losing her ambition to reduce. (Thanks to d-amphetamine's proven anorectic action.)
- She's not losing her composure. (The tranquilizer, Atarax, calms diet-induced anxiety and jitters.)
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One capsule half-hour before each meal. Bottles of 100 soft, soluble capsules, this actual size.

Prescription only.

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when emotional turbulence threatens medical or surgical care

Fear, agitation, and resistance often hinder medical diagnosis and treatment.

Sparine alleviates agitation, overcomes resistance, placates fears.

In addition to calming the patient, SPARINE controls other interfering symptoms: nausea, vomiting, and hiccups.

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Sparine (

HYDROCHLORIDE

Promazine Hydrochloride, Wyeth

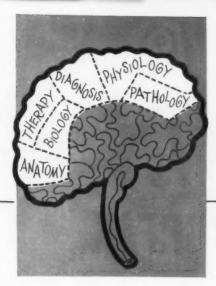
INJECTION

TABLETS

SYRUP



A Century of Service to Medicine



Mediquiz

These questions were prepared especially for Medical Times by the Professional Examination Service, a division of the American Public Health Association, Answers will be found on page 226a.

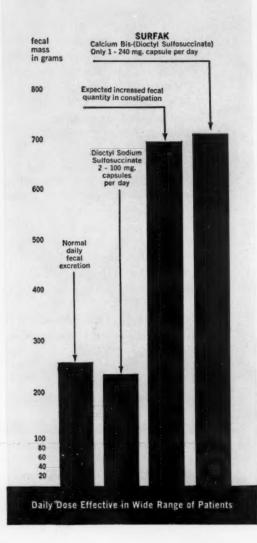
- 1. The characteristic triad of findings in the infantile variety of toxoplasmosis is:
- A) Internal hydrocephalus, bilateral chorioretinitis, and intracerebral calcifications.
- B) Bilateral optic atrophy, paralysis of scattered muscle groups, and terminal uremia.
- C) Congestive heart failure, uremia, and splenomegaly.
- D) Areas of osseous rarefaction, exophthalmos, and diabetes insipidus.
- E) Uveoparotitis, bilateral eighth nerve deafness, and ascites.
- 2. In the case of a complete transection of the spinal cord, the only one of the following fiber tracts which would show ascending degeneration is the:
 - A) Rubrospinal.
 - B) Ventral Corticospinal.
 - C) Vestibulospinal.
 - D) Tectospinal.
 - E) Spinotectal.
- 3. Which one of the following diseases is not characterized by basal ganglia involvement?
 - A) Dystonia musculorum deformans.
 - B) Erb's spastic palsy.
 - C) Kernicterus.
 - D) Pelizaeus-Merzbacher disease.
 - E) Jakob-Creutzfeld disease.
- 4. In a patient with early symptoms of tickling sensation in the trachea, followed by

an irritating cough, persistent hoarseness, constant or paroxysmal dyspnea brought about by change in position, hemoptysis, wheezing respirations and asphyxia, the diagnosis should be:

- A) Tuberculosis.
- B) Actinomycosis.
- C) Carcinoma of the trachea.
- D) Tracheo-esophageal fistula.
- E) Tracheopathia osteoplastica.
- 5. Of the following types of keratitis, the only one which is characterized by a tendency to remissions and exacerbations is:
 - A) Rosacea keratitis.
 - B) Keratitis sicca.
 - C) Neurotrophic keratitis.
 - D) Phlyctenular keratoconjunctivitis.
 - E) Keratomalacia.
- **6.** The only one of the following anemias that is characterized by an elevation of the plasma iron is:
 - A) Pernicious anemia.
 - B) Chronic hypochromic anemia.
- C) Anemia in pregnancy in the third trimester.
 - D) The simple chronic anemia of infection.
 - E) Anemia caused by hookworm infestation.
- 7. Section of the optic tracts on one side causes:
 - A) Blindness of the side opposite the lesion.

 Concluded on page 100a

Comparative Effectiveness in softening fecal mass



<u>ONE</u> SURFAK

Capsule softens up to 3 times the normal daily fecal excretion

Therapeutic effectiveness in constipation depends on a more complete softening of the increased fecal load. ONE Surfak capsule is all that is needed to soften fecal matter up to three times the normal daily fecal excretion.

This superior fecal softening effectiveness of Surfak is demonstrated in the chart shown, which indicates that a much wider range of patients—even those with severe constipation—can be successfully treated with only one capsule daily with usually complete freedom from side effects. Surfak is non-laxative, thus eliminating the "griping," flatulence, oily leakage or danger of habituation often associated with laxative therapy.

DOSAGE: One Surfak 240 mg. soft gelatin capsule daily for adults. Surfak 50 mg. soft gelatin capsules—for children, and adults with minimum needs, one to three daily.

SUPPLY: 240 mg.-bottles of 15 and 100. 50 mg.-bottles of 30 and 100.

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Relieves the anxiety behind the tension

Miltown not only calms the surface agitation of your nervous patient. It also helps you dispel the underlying fears and frustrations—the anxiety behind the tension.

And Miltown has none of the additional actions that you often find in many other tranquilizers. There are no

antihistaminic, antiemetic, anticholinergic or adrenolytic effects. Furthermore, Miltown has a simple dosage schedule and does not produce cumulative effects, change in appetite or libido, ataxia, Parkinson-like symptoms, jaundice or agranulocytosis.

Miltown

Usual dosage: One or two 400 mg. tablets t.i.d. Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; or as MEPROTABS* — 400 mg. unmarked, coated tablets.



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another patient with hypertension?



indicated in all degrees of hypertension

effective by itself in most hypertensives

HYDRODIURIL" with RESERPINE

HYDROPRES can be used:

- alone (In most patients, HYDROPRES is the only antihypertensive medication needed.)
- as basic therapy, adding other drugs if necessary (should other antihypertensive agents need to be added, they can be given in much lower than usual dosage so that their side effects are often strikingly reduced.)
- as replacement therapy, in patients now treated with other drugs (In patients treated with rauwolfia or Its derivatives, HYDROPRES can produce a greater antihypertensive effect. Moreover, HYDROPRES is less likely to cause side effects characteristic of rauwolfia, since the required dosage of reserpine is usually less when given in combination with HydroDIURIL than when given alone.)

HYDROPRES-25

25 mg. HydroDIURIL, 0.125 mg. reserpine. One tablet one to four times a day.

HYDROPRES-50

50 mg. HydroDIURIL, 0.125 mg. reserpine. One tablet one or two times a day.

If the patient is receiving ganglion blocking drugs or hydralazine, their dosage must be cut in half when HYDROPRES is added.

For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.



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SWYDROFRES AND HYDRODIURIL ARE TRADEMARKS OF HERCH & CO., INC.

- B) Binasal hemianopsia.
- C) Complete homonymous hemianopsia.
- D) Blindness on the side of the lesion.
- E) Bitemporal hemianopsia.
- 8. Adie's syndrome is characterized by a:
- A) Miotic pupil responding to light but not to accommodation, and hyperactive tendon reflexes.
- B) Miotic pupil fixed to light, responding to accommodation.
- C) Large pupil responding to light but not to accommodation, and absent tendon reflexes.
- D) Miotic pupil fixed to light and accommodation, and absence of tendon reflexes.

- E) Large irregular pupil fixed to light, responding sluggishly to accommodation, and absence of tendon reflexes.
- **9.** A basophilic adenoma of the hypophysis is thought to be related to:
 - A) Cushing's syndrome.
 - B) Hypothyroidism.
 - C) Gigantism.
 - D) Hypersomnia.
 - E) Acromegaly.
- 10. Benign exophthalmos in thyrotoxicosis is thought to be related to thyroxinosis, but malignant exophthalmos is due to:



- A) Excessive production of pituitary thyrotropic hormone.
 - B) Iodine deprivation.
- C) The inhibition of formation of pituitary thyrotropic hormone.
- D) The compensatory increase of thyrotropic hormone because of the decreased level of thyroxin in the blood.
- E) An increase in circulating protein-bound iodine.
- 11. Besides miosis, ptosis, enophthalmos and anhydrosis, which of the following reactions occur in Horner's syndrome?
- A) No reaction of the pupil to light and near fixation, decreased sensitivity to atropine and cocaine and hypersensitivity to adrenalin.
- B) Sluggish reaction of the pupil to light and near fixation, hypersensitivity to atropine and cocaine and decreased sensitivity to adren-
 - C) Normal reaction of the pupil to light and

- near fixation, decreased sensitivity to atropine and cocaine and hypersensitivity to adrenalin.
- D) Normal reaction of the pupil to light and near fixation, decreased sensitivity to adrenalin and hypersensitivity to atropine and cocaine.
- E) Normal reaction of the pupil to light and near fixation and increased sensitivity to atropine, cocaine and adrenalin.

(Answers on Page 226a)

VOLUME 2 MEDIQUIZ READY

A second volume of 150 Mediquiz questions, answers and references compiled by the Professional Examination Service, Division of the American Public Health Association is now available in booklet form for \$1 per copy. The supply of booklets is limited. To be certain you get your copy, send your dollar now to: Professional Examination Service, Department 23-B, American Public Health Association, 1790 Broadway, New York 19, N. Y. Specify "Volume 2." (A few copies of Volume 1 are available at \$1 each for those who missed out on this valuable review aid.)



supplied: aerosol container of 2 oz.

push-button control in

skin inflammation, itching, allergy

'puts out the fire" of inflammation - unlike ordinary ointments.

Applied directly on affected area, pantho-Foam is today's non-traumatizing way to provide prompt relief and healing in

eczemas (infantile, lichenified, etc.)

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neurodermatitis

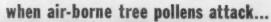
pruritus ani et vulvae

asis dermatitis

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allergen



BENADRYL

antihistaminic-antispasmodic

gives prompt, comprehensive relief

In sensitivity to tree pollens, BENADRYL provides simultaneous, dual control of allergic symptoms. Nasal congestion, lacrimation, sneezing, and related histamine reactions are effectively relieved by the antihistaminic action of BENADRYL. At the same time, its antispasmodic effect aids in alleviating bronchial and gastrointestinal spasms. This duality of action makes BENADRYL valuable throughout a wide range of allergic disorders.

BENADRYL Hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a variety of forms including: Kapseals, 50 mg.; Kapseals, 50 mg. with ephedrine sulfate, 25 mg.; Capsules, 25 mg.; Elixir, 10 mg. per 4 cc.; and, for delayed action, Emplets, 50 mg. For parenteral therapy, BENADRYL Hydrochloride Steri-Vials, 10 mg. per cc.; and Ampoules, 50 mg. per cc.

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IN EMOTIONALLY PROJECTED SMOOTH-MUSCLE SPASM...

Prompt, Profound <u>Protection</u>...at both <u>ends of the vagus</u>

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Professional reliance on the therapeutic proficiency of Pro-Banthīne in functional gastro-intestinal disorders has made it the most widely prescribed anticholinergic.

The consistent relief of emotional tensions afforded by Dartal makes this well-tolerated tranquilizer a rational choice to support the antispasmodic action of Pro-Banthīne in emotionally influenced smooth-muscle spasm.

These two reliable agents combined as Pro-Banthīne with Dartal consistently control both disturbed mood and disordered motility when emotional disturbances project themselves through the vagus to provoke such gastrointestinal dysfunctions as gastritis, pylorospasm, peptic ulcer, spastic colon or biliary dyskinesia.

USUAL ADULT DOSAGE:

One tablet three times a day.

SUPPLIED as aqua-colored, compression-coated tablets containing 15 mg. of Pro-Banthīne (brand of propantheline bromide) and 5 mg. of Dartal (brand of thiopropazate dihydrochloride).

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MODERN MEDICINALS

These brief résumés of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards. This file can be kept by the physician for ready reference.

Belakoids TT, The Columbus Pharmacal Co., Columbus, Ohio. Tablets, each containing 48.6 mg. pentobarbital sodium, 0.3111 mg. hyoscyamine sulfate, 0.0582 mg. atropine sulfate, and 0.0195 mg. hyoscine hydrobromide. Indicated to provide sustained relief from pain or dysfunction in gastrointestinal, urinary, biliary and uterine spasm, hypertonicity or hypermotility. *Dose:* 1 or 2 tablets every 12 hours. *Sup:* Bottles of 100, 500 and 1000.

Cytran, The Upjohn Company, Kalamazoo, Michigan. Tablets, each containing 2.5 mg. medroxyprogesterone acetate, 35 mg. ethoxzolamine and 300 mg. ectylurea. Indicated for premenstrual tension, to correct and relieve hormone imbalance, abnormal water retention, and emotional lability. *Dose:* One tablet once or twice daily beginning seven to ten days before onset of menses. *Sup:* Bottles of 20 and 100.

Declomycin Syrup, Lederle Laboratories Division, American Cyanamid Co., Pearl River, New York. Cherry-flavored syrup, each 5 cc. of which contains demethylchlor-tetracycline equivalent to 75 mg. demethylchlor-tetracycline HC1, 0.08% methylparaben and 0.02% propylparaben. Indicated for the treatment of abscess, acne, dysentery, bacteremia, bronchiectasis, bronchiolitis, endometritis, epididymitis, and all other diseases

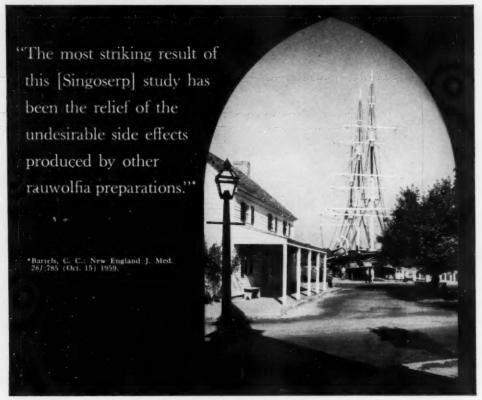
against which the tetracyclines are effective. *Dose:* Adult dosage is 600 mg. per day divided into two or four doses. Daily dosage for children is 3 to 6 mg. per pound of body weight dependent upon severity of the disease. *Sup:* Bottles of 2 oz.

Dornwal, Maltbie Laboratories Division, Wallace & Tiernan Inc., Belleville, New Jersey. Effective in the treatment of anxiety and tension states, a wide variety of psychoneuroses, premenstrual tension, menopausal syndrome, tension headache, alcoholism, and behavior problems in children. *Dose:* Adults, one or two 200 mg. tablets three times a day. Children (6 to 16) one or two 100 mg. tablets two times a day. Administration limited to three months duration. *Sup:* 100 mg. pink and 200 mg. yellow scored tablets, each in bottles of 100 and 500.

Furacin-HC Cream, Eaton Laboratories Division, Norwich Pharmacal Company, Norwich, New York. Contains 0.2% nitrofurazone and 1.0% hydrocortisone acetate in a vanishing cream base. Indicated for the control of inflammation, erythema, local edema and pruritus in such cases as pyodermas, furunculosis and secondarily infected dermatoses. *Dose:* Applied topically, three or four times per day. *Sup:* Tubes of 5 Gm. and 20 Gm.

Continued on page 108a

from the New England Journal of Medicine:



results you can confirm in your practice:

"In 24 cases syrosingopine was substituted for the rauwolfia product because of 26 troublesome side effects; these symptoms were relieved in all but 3 patients."*

Side Effects	Incidence with Prior Rauwolfia Agent		Incidence with Singoserp	
Depression		11	1	
Lethargy or fatigue		5	0	
Nasal congestion		7	0	
Gastrointestinal disturbances		2	2	
Conjunctivitis		1	0	

(Adapted from Bartels*)

many hypertensive patients prefer

Singoserp[®] (syrosingopine CIBA)

because it lowers their blood pressure without rauwolfia side effects

Tablets, 1 mg. (white, scored); bottles of 100.

CIBA

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on the road...
leave food urticaria
and other allergies by the wayside



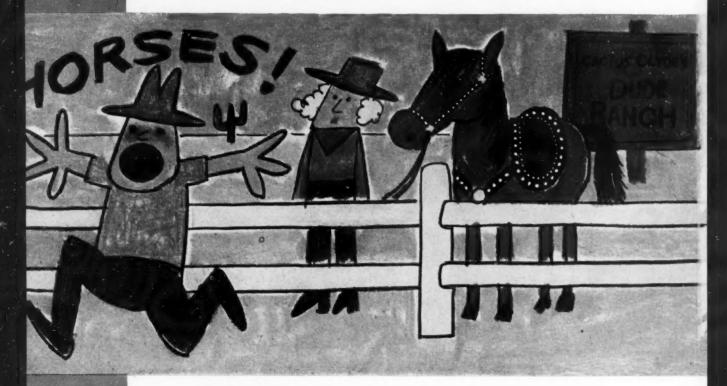
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FOR SIMULTANEOUS IMMUNIZATION AGAINST 4 DISEASES:

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DIPHTHERIA AND TETANUS TOXOIDS WITH PERTUSSIS AND POLIOMYELITIS VACCINES

now you can immunize against more diseases...with fewer injections

Dose: 1 cc.

Supplied: 9 cc. vials in clear plastic cartons. Package circular and material in vial can be examined without damaging carton. Expiration date is on vial for checking even if carton is discarded.



For additional information, write Professional Services, Merck Sharp & Dohme, West Point, Pa.



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- Lipitest Reagent (Schain), Merck & Co., Inc., Rahway, New Jersey. For quick determination of total serum lipids. Determination is simple—requiring only 3 minutes working time, 30 minutes for analysis and is accurate to ± 50 mg.% total serum lipids. Sup: 500 cc. (25 determinations) bottles (4X), or 500 cc. bottle and kit including 2 Lipitest bottles.
- Maxipen, J. B. Roerig & Co., Div. Chas. Pfizer & Co., Inc., New York, New York. Scored pink tablets each containing either 125 mg. or 250 mg. synthetic penicillin which combines the D and L isomers of alpha-phenoxyethyl penicillin potassium; or solution which, when reconstituted, provides 125 mg. per 5 cc. Indicated for treatment of infection caused by susceptible streptococci, pneumococci, staphylococci and gonococci. Dose: For moderately severe conditions, 125 to 250 mg., 3 times daily. For more severe conditions, 500 mg. every 4 hours if necessary. Sup: Tablets in bottles of 24 and 100; solution in bottles of 60 cc.
- Neutra-Carb Tablets, Burton, Parsons & Co., Washington, D.C. Tablets, each containing 0.84 Gram calcium carbonate, 0.13 Gram magnesium carbonate, 50 mg. ascorbic acid. Indicated for relief of gastric hyperacidity and for correction of any coincidental Vitamin C deficiency. *Dose:* Chew 1 tablet every 1 or 2 hours for full neutralization effect. *Sup:* Bottles of 100.
- Pentid-Sulfas for Syrup, E. R. Squibb & Sons, Div. of Olin Mathieson Chemical Corp., New York, New York. New dosage form, each 5 cc. teaspoonful of which, after reconstitution, provides 200,000 units penicillin G potassium and 0.5 Gm. triple sulfonamides. Indicated for treatment of infections sus-

- ceptible to penicillin or the sulfonamides. *Dose:* Patients weighing less than 50 lbs., 1 teaspoonful 4 times daily; more than 50 lbs., 2 teaspoonfuls 4 times daily. Infants, 1/2 tsp. 4 times daily. *Sup*: 12-dose bottles.
- Proloid 3-Grain, Warner-Chilcott Laboratories, Morris Plains, New Jersey. New dosage strength, considered by clinicians to be the average daily dosage for many forms of mild hypothyroidism such as obesity, sterility, and menstrual dysfunction. Sup: Bottles of 100.
- Rhulifoam Aerosol, Lederle Laboratories, Div. American Cyanamid Co., Pearl River, New York. Combination of 0.94% zirconium oxide, 0.11% menthol, 0.11% camphor, 0.94% benzocaine, 2.0% calamine, and 8.40% isopropyl alcohol. Indicated to supply adequate relief in the treatment of insect bites, poison oak, ivy or sumac, or in other skin conditions where an analgesic-anesthetic compound is feasible. *Use:* Apply to affected area 2 or 3 times daily and at bedtime, or as needed. *Sup:* Aerosol dispensers of 2 oz.
- Syndecon, Bristol Laboratories, Syracuse, New York. Tablets, or powder for reconstitution. Each tablet or 5 cc. teaspoonful contains 62.5 mg. potassium alpha-phenoxyethyl penicillin, 2.5 mg. phenylephrine hydrochloride, 10 mg. phenylpropanolamine hydrochloride, 3.75 mg. phenyltoloxamine citrate, 1.25 mg. chlorpheniramine maleate, and 120.0 mg. APAP. Indicated for the symptomatic relief of the common cold and the prevention of secondary bacterial infections of the upper respiratory tract which may be associated with the common cold or other viral respiratory infections. Dose: As directed by physician. Sup: Tablets in bottles of 25 and powder in bottles sufficient for

MEDICAL TIMES



condition of the normal skin in the external ear canal. • Sterile ear solution . . . with a specially wrapped sterile dropper. • Does not obscure anatomic landmarks during otoscopy. • Virtually nonsensitizing and nonirritating. • Each cc. of OTOBIONE contains: anti-inflammatory prednisolone acetate, 5 mg., anti-bacterial neomycin (from sulfate) 3.5 mg., and anti-fungal sodium propionate 50 mg. Supplied: In 5 cc. bottles. White

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control of major tremor,1,4 a key symptom of Parkinson's disease. By improving fine finger dexterity and muscular coordination, Parsidol helps increase functional efficiency.

Parsidol also brightens the patient's outlook and his selfconfidence is restored as he finds himself able to do more things with greater ease. Moreover, Parsidol is "very well tolerated by the geriatric patient,"1,3,4 who comprises twothirds of the nation's parkinsonian roster.3 Effective by itself Parsidol is also compatible with most other antiparkinsonian drugs. 1,2,4 Most patients respond to a maintenance dosage of 50 mg. q.i.d.

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- Schwab, R. S. and England, A. C.: J. Chron. Dis. 8:488 (Oct.) 1958.
 England, A. C. and Schwab, R. S.: A.M.A. Arch. Int. Med. 104:439 (Sept.) 1959.
 Schwab, R. S.: Geriatrics 14:545 (Sept.) 1959.
 Doshay, L. J. et al.: J.A.M.A. 166:348 (Feb. 4) 1956.

Demethylchlortetracycline Lederle

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reduction in incidence and or severity of gastrointestinal side effects may be attributed to the far lower



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Capsules, 150 mg.-Pediatric Drops, 60 mg./cc.-New Syrup, cherry-flavored, 75 mg./5 cc. tsp., in 2 fl. oz. bottle-3-6 mg. per ib. daily in four di-vided doses.

GREATER ACTIVITY...FAR LESS ANTIBIOTIC...UNRELENTING-PEAK CONTROL..."EXTRA-DAY" PROTECTION AGAINST RELAPSE LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

60 cc. when reconstituted with 41 cc. of water.

Ser-Ap-Es Tablets, Ciba Pharmaceutical Products, Inc., Summit, New Jersey. Tablets, each containing 0.1 mg. Serpasil, 25 mg. Apresoline, and 15 mg. Esidrix. Indicated for treatment of moderate to severe forms of high blood pressure, particularly in cases where a single drug had proven ineffective. *Dose:* 1 or 2 tablets three times daily. *Sup:* Bottles of 100.

Ta-Test, Hyland Laboratories, Los Angeles, California. Latex-fixation rapid slide testing procedure for diagnosis of thyroid diseases. Speedily detects the presence of the precipitin antibody associated with Hashimoto's disease (chronic lymphoid thyroiditis) and primary myxedema. The patient's inactivated serum is mixed with Latex Thyroglobulin Reagent on a glass slide and then observed for obvious clumping. Positive control serum is mixed with the reagent on another section of the slide. Sup: 20-test kits containing latex-thyroglobulin reagent, positive control serum, glycine-saline buffer diluent and a divided glass slide.

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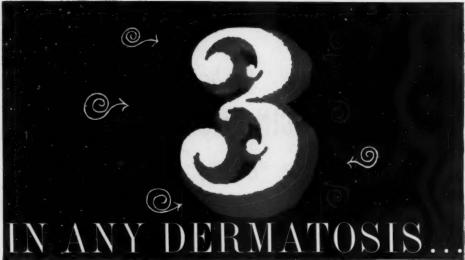
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*Babcock, G., Jr., and Packard, L. A.: Clin. Med. 6:985
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HYPERTENSION

TYPES AND TREATMENT

Hypertension continues to challenge and perplex the physician. While most patients can be maintained by some combination of general management, control of diet and weight and one or more of the antihypertensive drugs, still, the cause of essential hypertension remains unknown.

FRANCIS D. MURPHY, M.D., M.S. (Med.) F.A.C.P., Milwaukee, Wisconsin

A voluminous literature has accumulated on the subject of hypertension and its various forms. Essential hypertension comprises approximately eighty-five percent of all hypertensive patients, and although there is no unanimity regarding the exact nature of most types of hypertension, it is agreed that the cause of essential hypertension is unknown. Many attempts have been made to define its etiology and pathogenesis, but so far the questions surpass the answers. This does not mean that nothing is known about essential hypertension, for a great deal has been learned regarding its relationship to arteriosclerosis, renal insufficiency, and heart disease.

Intensive research during the past ten years has produced an impressive array of hypotensive drugs, but yet the ideal agent has not been found. Reduction of blood pressure is not synonymous with modification of fundamental pathologic changes. Although these drugs are

beneficial in some patients they are often used too promiscuously in the management of the hypertensive patient. It is well to remember that the height of the blood pressure is only one phase of the disorder, and treatment requires not only a reduction of the blood pressure but alteration of other factors as well.

Many patients with mild, moderate hypertension are being treated unnecessarily and would progress satisfactorily without resorting to extensive antihypertensive therapy. Symptomless hypertensives are often made worse by treatment with powerful drugs, for nearly all of these agents present some disturbing side-effects producing disorders that sometimes are more serious than the hypertension itself. The ecstasy with which these drugs are advertised,

Dr. Murphy is Clinical Professor of Medicine, Marquette University School of Medicine and Director of Medicine Emeritus, Milwaukee County Hospital.

reported, sold and used is unjustified. Having lived through a period of therapeutic nihilism, the do-nothing policy is not acceptable either, but there must be a middle ground between the extremes of the old and the excesses of the new. As Page¹ has pointed out, elevated blood pressure alone is not the same thing as hypertensive cardiovascular disease; and if we use the term "essential hypertension" unguardedly, we may include many different kinds of hypertension with many different mechanisms.

The rational method of treatment would be to remove the cause, but since the cause of essential hypertension is unknown, treatment must be empirical. This is difficult because the disease may take a variable course which makes an evaluation perplexing.

Classification

Many classifications of hypertension have been offered with similar groupings. None has been found completely satisfactory. The classification shown on the opposite page has been a valuable guide in the study of many different types of hypertension, and is the result of personal observation in a large hospital clinic, as well as in private practice.

Essential hypertension actually can be divided into two categories, the first of which is the systolic type, because the systolic pressure only is raised; for example a pressure of 160/70. Such a condition is usually due to a hardening of the aorta and an atherosclerotic condition of the larger arteries of the body. It occurs generally in patients past the ages of fifty or sixty years. An elevated systolic pressure may also be due to aortic regurgitation, hyperthyroidism, or any condition which will increase the systolic stroke volume of the left ventricle. Usually no special treatment is necessary for these patients, as the diastolic pressure remains low.

The second part of this subdivided category is the hypertension due to an increased peripheral resistance in the arterioles, with the diastolic pressure above 100 and the systolic pressure elevated also. This diastolic type of hypertension commands special interest, care-

ful evaluation and skillful treatment in order to protect the patient and his vascular system from the ravages of hypertension.

This simple differentiation emphasizes that the patient with systolic hypertension receives no benefit from vigorous drug therapy, and often is harmed. Such treatment can, and has lead to mental confusion, lightheadedness, personality changes, even cerebral occlusion, and mental deterioration may develop.

Grollman² believes this differentiation has not been given adequate consideration. He clearly points out the relationship between hypertension and the vascular system, and states that an erroneous concept has resulted from the idea that any drug that lowers the blood pressure, regardless of its mechanism of action, is a potent therapeutic agent.

The term essential hypertension was first popularized by Frank³ to include those instances of chronic high blood pressure neither clinically nor anatomically associated with inflammatory diseases of the kidney or the urinary tract. Such a definition would be challenged today because of its lack of precision.

The benign and malignant forms of essential hypertension, as classified by Volhard and Fahr⁴ have since been criticized. Murphy and Grill⁵ investigating this problem correlated the differences between benign and malignant hypertension with clinical and histologic evidence. The variance found was in the degree of severity, speed of progress and ultimate outcome. As the term becomes more defined and research advances, essential hypertension does not carry the same connotation as formerly. Turner⁶ finds the definition unsatisfactory because the severity of so-called benign hypertension may vary, and it seems illogical to label hypertension benign in one whose blood pressure is so great he may die from cerebral hemorrhage or heart failure.

The kidney has long been considered the site of the difficulty by many workers. Although its relationship to hypertension has been more clearly defined, the extent of the involvement has not yet been disclosed. In the last twenty-five years opinions ranged from one extreme,

CLASSIFICATION OF HYPERTENSION

• Renal hypertension

Acute glomerulonephritis

Lupus erythematosus and/or other collagen diseases

Chronic glomerulonephritis

Chronic pyelonephritis with contracted kidney

Congenital polycystic disease of the kidney

Glomerulosclerosis of diabetes (Kimmelstiel-Wilson disease)

Obstructive uropathies involving the ureter and kidney (stones and obstructions)

• Hypertension of hormonal origin (endocrine)

Pheochromocytoma or other tumors of adrenal gland

Tumors or hyperplasia of adrenal cortex (Cushing's syndrome)

Basophilic tumors of the pituitary gland

Menopausal

• Cardiac and vascular disorders

Hyperthyroidism

Aortic regurgitation

Congenital lesions, as arteriovenous fistulas

Coarctation of the aorta

Arteriosclerosis of large-vessel type

• So-called psychogenic hypertension

Anxiety states, acute or chronic

Psychogenic stimuli, as fear, anxiety and rage

Diseases of the brain itself, as tumors of the brain

Disturbances of the vasomotor centers of the brain

Disturbances of right and left aortic carotid sinus nerves

• Essential hypertension

Benign or the presclerotic and the early arteriosclerotic stages

(corresponding to Wagener and Keith classes I and II)

Premalignant or transitional stage between benign and malignant (grade III)

Malignant hypertension (grade IV)

that essential and malignant hypertension are due entirely to renal disease, to the other extreme of denying all association.⁷ Peart⁸ says we are faced with a bewildering prospect in attempting to define a relationship between the two, which is made worse by the contradictory statements concerning mechanisms by various authors.

This uncertainty and lack of unanimous opinion, along with the advent of the antihypertensive drugs makes classification necessary in the management of hypertensive patients, even though it is recognized that such a classification cannot be precise.

The endocrine disorders include some of the types of hypertension for which the cause is known, such as pheochromocytoma, primary aldosteronism, renal artery disease and Cushing's syndrome. The retention of sodium has been suggested as the primary element in endocrine hypertension. The removal of a secreting tumor, such as in pheochromocytoma, will usually reverse the hypertension. High blood pressure is almost always found in patients with primary aldosteronism, though why these patients excrete excessive amounts of the adrenocortical hormones has not been fully explained.

The so-called psychogenic type of hypertension is often confused with other forms, especially in the early stages of the disease. Nevertheless, there is one great difference. Essential hypertension is a disease that progresses, although the pressure may fluctuate. In so-called psychogenic (sometimes called neurogenic) hypertension, once the cause for the emotional upsurge is removed, the pressure returns to normal and remains there. This type of hypertension is seldom seen in hospitals, but often seen in office practice. It was common during the economic depression of the early thirties when men lost their money and position overnight. In such cases attention should be devoted to the psyche more than the soma.

Diagnosis

The exact level of the blood pressure in a given case may have little significance, but in a large series of cases the magnitude of the blood pressure is important as a diagnostic and prognostic factor. The blood pressure, especially in the benign phases, may fluctuate greatly, with postural variations. The pressure may be highest on lying down, lowest on standing, and intermediate in a sitting position.

One should constantly be on guard against the impending danger of heart disease in hypertension. The hypertensive heart may manifest itself as angina pectoris, coronary insufficiency or occlusion, or congestive heart failure. Other factors which may be forerunners of impending failure are excessive physical exertion, acute infections or trauma.

The size of the heart may betray the onset of myocardial insufficiency in hypertension. In moderate hypertension the heart may be greatly enlarged, and in severe hypertension it may be negligible. Physical examination will usually determine this, but fluoroscopy and electrocardiography are helpful.

The left ventricle usually gives the trouble in the early stages of heart failure, and episodes of acute pulmonary edema or other evidences of congestion may occur. Gallop rhythm is a danger signal warning that failure is imminent. Once the left ventricle fails, the patient's future is perilous for restitution to normal in such instances is uncommon.

As the kidney is so closely associated with hypertension, a careful study of the urine and renal function tests is imperative. Cerebral complications are difficult to evaluate but a painstaking ophthalmologic study of the eyegrounds frequently reveals the degree of arteriosclerosis and necrotic changes which may appear in the brain and other organs of the body. The old dictum that the eyeground is the mirror of the kidney should not be forgotten.

Many patients have moderate hypertension for years without developing any of the serious complications which may accompany the disorder. Their exact number is not known, although many attempts have been made to ascertain this. Murphy and associates in a study of three hundred and seventy-five autopsied patients found that 50 percent of the deaths

were caused by heart disease, 10.4 percent by renal disease, and 13.4 percent were due to cerebral complications. Other comparative analyses of a large series of cases produced similar results and figures.

How long a patient will live with high blood pressure before one of the serious complications sets in is little understood. With the growing use of the antihypertensive drugs, the chances of obtaining an accurate, natural history of untreated patients seems bleak. For purposes of practical prognosis, hypertension in individuals over forty may be rapidly progressive; in patients over sixty it usually takes a benign slow course with fewer of the disastrous complications.

Treatment

• GENERAL MEASURES—General management of the hypertensive patient has been somewhat neglected in the enthusiasm for the newer drugs. This is regrettable for often minor changes in a patient's living habits, and mild sedation will control high blood pressure. Additional rest, more recreation and modification of habits usually has a two-fold beneficial effect, for it may not only lower the blood pressure but simultaneously lessens the work of the heart. Too little time is given to the patient in many instances, and too little is known of his emotional life or stressful situations which may be contributing to high blood pressure.

Most patients feel better and progress more satisfactorily if they stop smoking. In some patients it is known to produce adverse cardio-vascular effects, including a rise in blood pressure. Patients accustomed to the use of alcohol may continue its use in moderation.

• DIET—Hypertensive patients who are overweight feel better when they reduce. The heart has less work in maintaining circulation, and a lower fat intake is now believed effective in controlling the atherosclerosis associated with hypertension. No definite relationship between the fat content of the diet and cerebral, myocardial, renal, or peripheral atherosclerosis has been established. However, there is sufficient evidence to warrant the investigations

which continue in this field.

In a recent study of one hundred obese patients it was found that almost half had high blood pressure, indicating that hypertension is a major, perhaps the sole significant factor in the development of coronary heart disease.¹⁰

Some relationship undoubtedly exists between sodium and hypertension, and the value of a low-salt diet is questioned. The restriction of salt came into popularity long before it was known to have anything to do with the mechanism of hypertension. Allen11 in 1920 advocated the use of the salt-free diet in hypertension. Dahl12 recommends the early adoption of a frankly low-salt diet for persons with a family history of hypertension, with levels of 500 to 1000 milligrams per day maximum. For hypertensive patients without a family history of the disease, a maximum of 5 grams per day is suggested. With the present availability of chlorothiazide, however, rigid salt restriction is not considered as necessary as formerly.

- ANTIHYPERTENSIVE DRUGS—None of the antihypertensive drugs will correct the underlying cause of hypertension. Any drug or combination thereof that is effective in lowering blood pressure with a minimum of discomfort to the patient is the drug therapy of choice. These agents may be classified as follows:
 - A) The ganglion blockers, which act peripherally, (hexamethonium, Ansolysen,[®]
 Ecolid[®], Inversine[®])
 - B) The drugs that directly effect the cardiovascular system, (Apresoline,® for example, acts directly on the kidney with vasodilation)
 - C) The rauwolfia alkaloids, (the drugs that act upon the brain itself)
 - D) The saluretics, (chlorothiazide and hydrochlorothiazide) possibly reduce blood pressure by reducing blood volume. Their exact mechanism is not clear, but they promote sodium chloride and potassium excretion probably by blocking tubular reabsorption.

To this group may now be added a drug that, from preliminary studies, will serve as an adrenergic blockade, selectively blocking the peripheral sympathetic nervous system without antagonizing the parasympathetic action. It is the latter which accounts for most of the unpleasant reactions of the ganglion blockers. Studies with bretylium tosylate (Darenthin®) so far indicate this may be an agent of great interest in the long-term control of severe hypertension.¹³

A. Ganglion Blocking Agents: These drugs are beneficial in some types of hypertension, although their value in malignant hypertension and renal insufficiency with hypertensive encephalopathy is controversial. Intravenous injection of a ganglion blocking agent in such fractional doses of 15 to 20 milligrams in a 20 cc. solution will often relieve the cardiac overload within minutes. Cases with advanced renal disease may be made worse by such treatment; but if there is no nitrogen retention these drugs deserve a trial when others fail. If there is a rising non-protein nitrogen this treatment is contraindicated.¹⁴

Wilkins¹⁵ believes the blocking agents, like surgical splanchnicectomy, are slowly assuming a position of last resort in the treatment of essential hypertension. Parenteral injections of reserpine, with or without chlorothiazide or hydralazine, may be just as effective for short-term emergency treatment.

Hypertensive emergencies such as acute left ventricular failure with pulmonary edema, acute hemorrhage of the brain, and hypertensive encephalopathy may complicate the course of essential hypertension. These have been given thorough attention by Gifford.16 Hexamethonium, Apresoline, reserpine or veratrum given intramuscularly or intravenously are effective. The prompt relief given the patient with left ventricular failure and pulmonary edema, which may occur in a hypertensive crisis, is remarkable. The effect is one of the most spectacular observed in medicine. Fifteen milligrams of hexamethonium in a syringe with 20 cc. of 5 percent dextrose given slowly, intravenously, will usually accomplish the necessary reduction in blood pressure. One-hundredtwenty-five to 250 milligrams in 500 cc. of 5 percent dextrose may also be given over a longer period of time. There is an advantage in using a smaller volume of the vehicle as the blood volume already is excessive. Great care must be used in giving these infusions in a crisis, they should be given slowly, and the blood pressure recorded every minute. The rate of infusion may run from 2 to 5 milligrams per minute if conditions warrant it. Given too rapidly the pressure may fall to an undesirably low level. When normal pressure has been achieved it may then be kept at a moderate level by the proper adjustment of these infusions.

B. Drugs Affecting the Cardiovascular System: Fifty milligrams of Apresoline three times a day has proved to be particularly effective both in benign and malignant hypertension. This is a compatible drug which may be used advantageously with Rauwolfia, hexamethonium or chlorothiazide. Although a lupus-like syndrome has been described in connection with the long-term use of Apresoline; this is now considered a rare complication.

C. Rauwolfia Alkaloids: For benign types of hypertension, .4 milligram of reserpine, or one of the drugs in this group, is often efficacious. If the hypertension is more severe, a blocking agent in combination with one of the rauwolfia group is advisable.

The most severe risk to the patient on rauwolfia therapy is that of depression, which can be serious. Before exposing patients to such an experience it would be advisable to determine whether he has a history of depressive episodes.

D. The Saluretics: The saluretics, Diuril® and HydroDiuril® in particular, have been sensational adjuncts in the treatment of hypertension. Aside from their diuretic value, and whatever hypotensive qualities of their own they may possess, they enhance the effect of the ganglion blocking drugs to such an extent that dosage can be reduced, which in turn alleviates some of the unpleasant side-effects inherent in most of the ganglion blockers. In addition these drugs appear to be freer from serious side-effects than some of the other anti-

hypertensive agents, which undoubtedly accounts for much of their popularity. An average dose of Diuril, 200 to 400 milligrams daily, given in the morning, or 50 milligrams of HydroDiuril, two to three times daily, will lower the blood pressure in approximately fifty percent of the patients. When these drugs are used in conjunction with other antihypertensive drugs the response is around eighty percent.

As is the case with any of the powerful drugs, chlorothiazide should be administered with caution, as severe postural hypotension may ensue. Hypokalemia can result in toxic effects of digitalis on the heart, and renal damage due to prolonged potassium depletion is also a possibility.

Drug dosage is never a standardized procedure, but must be adjusted to suit the individual patient's needs. Once effective therapy has been established it is usually wise to continue with it.

 SURGERY—Patients who do not respond to intensive medical therapy, the young or middle-aged with a relatively high diastolic and relatively low pulse pressure appear to be the best candidates for surgery. This method for controlling hypertension is not, however, a popular one. There is no certainty that sympathectomy will lower the blood pressure, or prolong the patient's life. Thoraco-lumbar sympathectomy and bilateral adrenalectomy, as a two-stage procedure, are major operations, and as such involve great risk both during and following surgery. Leishman¹⁷ achieved a satisfactory fall in blood pressure in eighty percent of the pat'ents in his study who underwent lumbodorsal sympathectomy. The extensive denervation necessary for this rather high percentage is a gruelling and risky experience. However, the relatively young patient may consider it a reasonable alternative to a lifetime of taking drugs.

Hypertension continues to challenge and perplex the physician. Confronted by a patient with a resistant and excessively high blood pressure one is tempted to use almost any means to lower it. At present it can be lowered only by constant medical supervision on the part of the physician, and various unpleasant side-effects and financial burden, on the part of the patient.

Summary

A classification of the types of hypertension has been presented, as well as a classification of the antihypertensive drugs. Systolic as opposed to diastolic hypertension is differentiated, and some of the complications which may aggravate the course of essential hypertension are discussed.

Essential hypertension is by far the most common type of the disease, and it is not unlikely that in the future the term may be used to embrace several subdivisions rather than one single entity.

Although the ideal drug for the treatment of hypertension has not been found, the antihypertensive agents currently in use yield the best therapeutic benefits so far observed, when specific therapy is warranted. However, not all patients with high blood pressure require hypotensive drugs. Diet, loss of weight, and the simple modification of living habits is often all that is required. At present, blood pressure can be lowered by constant medical supervision and an intelligent approach on the part of the physician.

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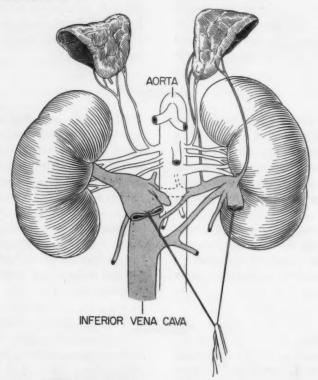
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CLINI-CLIPPING



Blood supply to kidneys and suprarenal glands

DONALD F. McDONALD, M.D. and GERALD P. MURPHY, M.D. Rochester, New York

Urinary Calculogenesis

The Role of Corticosteroids in

Experimental Urinary Calculogenesis

ndogenous and exogenous corticosteroids have been observed to have an enhancing or promoting influence on urinary calculus formation.1-5 One possible mechanism of action of cortisone treatment is a reduced excretion of protective urinary colloids. Butt has submitted data to support this view.6 There is also evidence that increased urinary excretion of uric acid follows treatment with ACTH or cortisone.7, 8 Hellman has shown that ACTH treatment can stimulate acute gout⁹ and Selye found that stress caused increased uric acid excretion.10 Increased urinary calcium excretion after treatment with adrenal corticosteroids or ACTH has been reported.11, 12 But in sarcoidosis cortisone treatment may reduce urinary calcium excretion.13

The newer synthetic, more potent anti-flammatory steroids have not been extensively studied in regard to their calculogenic action. The present experiments were conducted in an endeavor to assess the calculogenic potency of several steroids. By varying doses, an effort was made to relate calculogenic and anti-inflammatory potency. Analysis of the calculi formed during treatment when compared to control calculi was intended to aid in elucidation of mechanisms.

Materials and Methods

Into male Long-Evans rat bladders, 15 mgms. cylindrical c.p. magnesium ribbon niduses were aseptically introduced by Vermeulen's technique. Animals were fed Fox Checkers and water ad libitum. Each group consisted of fifteen animals. Intramuscular injections were begun on the first postoperative day.

EXPERIMENT I: The two control groups received .2 cc. of 0.9% saline or .2 cc. of corn oil daily. Other groups received .2 mg. per day of cortisone, triamcinolone, prednisolone, DOCA, ACTH and hydrocortisone in 0.2 cc. of corn oil or saline.

EXPERIMENT II: The following doses of steroids were given per 200 gm. rat daily intramuscularly in 0.2 ml. of corn oil: dexamethasone 0.002 mgm., triamcinolone free alcohol 0.09 mgm., prednisolone 0.12 mg. and cortisone 0.6 mgm. Hydrocortisone 0.5 mgm. was given every two days as an aqueous suspension.

After four weeks of treatment the animals

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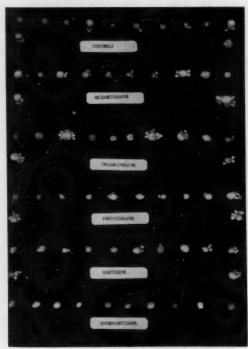


FIGURE I Experimental calculi, Experiment II.

were weighed and sacrificed. Urinary pH was estimated by short range test paper. All calculi were removed, blotted and weighed. Statistical correlations were made by Fisher's method.¹⁵ The probability of chance occurrence was taken from his tables. Calculi were analyzed by standard quantitative chemical methods previously reported.

Results

Table 1 gives the average final weight of calculi including the 15 mg. nidus. All animals formed calculi in these groups in which the final average weight exceeded control values. All control animals formed calculi. Urinary pH as measured by short range test paper showed no consistent or marked difference between groups. Rats showing urinary infection were discarded. All animals gained and looked healthy except for those groups subject to adrenalectomy, dexamethasone and amphenone B treatment. These animals all lost weight. Severe toxicity in the amphenone group was

also manifest by paralysis and hemorrhage. Results of the two experiments are in agreement except for the groups treated with hydrocortisone. In neither experiment were the cortisone differences from controls significantly different. Adrenalectomy materially reduced the rate of stone formation. Amphenone B treatment did not effect sufficient adrenal cortical inhibition in the doses used to inhibit stone formation. In Experiment II the corticoids were given in doses proportionate to their antiinflammatory potency. Treatment corresponded to a human dose of 200 mgms. cortisone daily. Triamcinolone treatment gave statistically signicant increases in average stone weight in both experiments (p < 0.05 and < 0.10). Desoxycorticosterone treatment gave an increased average weight significant at the ten percent level. Doubling the dose of triamcinolone did not alter the size of experimental calculi. Analysis of calculi (Table 2) showed that control calculi were predominantly composed of ammonium magnesium phosphate hexahydrate (struvite). In Experiment I traces of uric acid were found in those calculi formed in animals receiving triamcinolone and desoxycorticosterone. In Experiment II (Table 2) the calculi were composed predominantly of magnesium and phosphate in a ratio suggestive of struvite. All of the experimental calculi contained some calcium and some traces of uric acid. The calculi formed during dexamethasone treatment contained appreciable amounts of calcium.

Discussion

The administration of corticosteroids to animals actively forming struvite (NH₄MgPO₄• 6H₂O) vesical calculi about a metallic foreign body tends to augment the process. Comparison of the two experiments leads us to conclude that the anti-inflammatory property of the corticosteroids is not the factor promoting experimental calculogenesis. If this were not true there should have been a wider variation in the average size of calculi in Experiment I where the steroids were all given in the same doses by weight. The traces of uric acid in the calculi from steroid-treated animals can not

TABLE 1 EXPERIMENT I EXPERIMENT II Dose CALCULUS Dose CALCULUS MG./D. WT. MG. MG./D. WT. MG. CONTROL SALINE 0.2 90.7 CORN OIL 0.2 100.8 0.2 104.6 ACTH 0.2 112.7 CORTISONE 0.2 140.5 0.6* 121.2 HYDROCORTISONE 0.2 0.5 92.9 146.0 **PREDNISOLONE** 0.2 157.2 0.12 124.4 TRIAMCINOLONE 0.09 0.2 175.0 177.4 DEXAMETHASONE 0.002 164.4 **DOCA** 0.2 148.6 AMPHENONE B 16.0 85.5 ANDRENALECTOMY 66.0 * Every two days.

TABLE 2 ANALYSIS OF EXPERIMENTAL CALCULI IN EXPERIMENT II

	MG%	CA%	PO4%	URIC ACID
CONTROL	9.5	0	12.9	trace
DEXAMETHASONE .	9.0	1.8	11.9	trace
CORTISONE	9.7	.6	8.8	trace
HYDROCORTISONE	11.7	.7	12.1	trace
PREDNISOLONE	10.0	.3	13.0	trace
TRIAMCINOLONE	9.7	.7	11.5	trace
NH ₄ MgPO ₄ *6H ₂ O*	9.9	0	12.6	0

^{*} Composition of chemically pure struvite.

explain the differences in size of the calculi. Hence, the catabolic uricosuric effect of steroid therapy is probably not the cause of increased calculus deposition. The calcium content of the experimental calculi in steroid-treated animals is a consequence of the known calciuretic action of the corticosteroids. Except for the dexamethasone-treated animals however, the amount of calcium containing calculus was not sufficient to contribute significantly to the increased size of the stones. This group of animals lost eleven percent of body weight during four weeks treatment. Triamcinolone was the most potent calculogenic agent employed. The composition of triamcinolone calculi suggests that its calculogenic effect is merely augmentation of the natural tendency.

Failure of amphenone B even in toxic doses to significantly depress calculogenesis may indicate that the degree of adrenal suppression was inadequate. This is suggested by the observation that more marked reduction in calculogenesis followed bilateral adrenalectomy. Amphenone B has been observed to partly inhibit the normal human adrenal.¹⁶

The clinical experiences of Butt⁶ and Goodwin¹⁷ that corticosteroid therapy may stimulate stone growth confirms our experimental data. A patient who has urinary calculi should be treated with corticosteroids with caution. Because of the more pronounced effect of triamcinolone on experimental calculogenesis, this corticosteroid might be contraindicated. During corticosteroid therapy hematuria or renal colic should suggest a urinary calculus.

Conclusions

The effect of treatment with six corticosteroids, amphenone B, ACTH and adrenalectomy on experimental calculogenesis in rats is reported. In the doses employed, corresponding to usual clinical doses, most of the corticosteroids seemed to increase the rate of calculus formation. The agent most potent in stimulating calculus formation was triamcinolone. There was no apparent relationship between anti-inflammatory and calculogenic potency of the corticosteroids studied. Analysis of calculi suggested that the increased size of calculi in treated animals was only partly due to deposition of calcium salts. Uric acid depo-

sition was not an important contributing factor. The mechanism of action of the corticosteriods in augmenting experimenting calculus formation was not determined but probably was not increased uric acid or calcium excretion. Because corticosteroid therapy has also been clinically associated with augmented urinary calculus growth, known urinary stone formers should be treated with corticosteroids cautiously.

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University of Rochester School of Medicine



"OFF THE RECORD . . . "

Share a light moment or two with readers who have contributed stories of humorous or unusual happenings in their practice. PAGES 25a AND 29a.

Public Relations and

ERNEST H. DENGLER, M.D. Pottstown, Pennsylvania



the Eye

Public Relations literally means to "help someone." A physician does not need to be told that he has a duty to the public, because he had this thought instilled in him from his first day in medical school. But public relations taken on another aspect when it tries to help the public by cementing relations between the specialist and the family doctor. The patient will greatly benefit from this closer relationship because he will receive better treatment.

How often have we heard family doctors say to their patients: "I know nothing about the eye; you want to see someone specializing in the eye." This is poor public relations because most of the time the patient leaves the doctor's office without the slightest idea where to go for treatment. At this point, the doctor should suggest that the patient go to an ophthalmologist (M.D.). Better still, he should treat the eye himself.

The family doctor is not expected to treat every medical or surgical case that comes to his office. He is not expected to do and know all the intricate procedures of ophthalmology. But, as a medical doctor he is qualified to treat all parts of the body. Certainly if he treats other parts of the body, he should not throw his hands up in horror everytime he sees a patient complaining about his eyes. If he feels the patient should be seen by an eye specialist, the least he can do is to give him

the names of several ophthalmologists and send him on his way.

Unfortunately, the practice of ophthalmology today is being jeopardized by the non-medical practitioner who intercepts the patients between the family doctor's office and the ophthalmologist. By law, the non-medical practitioner is allowed only to refract the eyes for glasses and not much more. He has no legal right to use drops or give medical treatment of any kind. Through the efforts of the National Medical Foundation for Eye Care and our various state and national programs, we hope to discourage the tendency of many non-medical practitioners to go too far in their rendering of visual care. We are trying to put the patient back in the family doctor's office. Here the patient will receive better care because his doctor knows more than the non-medical practioner by virtue of his medical school training.

This is where good public (and professional) relations can do a job — helping the general practitioner to recognize and treat the common everyday office variety of eye problems. The family physician will find he can handle many simple eye cases with a few necessary instruments and medicines. The following items are necessary:

Dr. Dengler is a member of the Pennsylvania Academy of Ophthalmology and Otolaryngology, and a member of the Committee for the Conservation of Vision.

Instruments and Equipment

- 1. Comfortable chair with head rest.
- 10 diopter magnifying lens (American Optical Co. or Bausch and Lomb Co.)
- 3. No. 5 binocular loupe (Beebe or Edroy)
- Electric spot lamp on stand (Burton or American Optical Co.)
- 5. Tonometer (Schiôtz or McLean)
- 6. Ophthalmoscope (no batteries, charge in electric outlet)
- 7. Knife needle for corneal foreign bodies (Davis or Knapp)
- 8. Dental burr or chuck handle
- 9. Cilia forceps
- Forceps, needle holders, scissors etc. to suture lid skin.
- 11. Snellen chart (letters and inverted E's)

Medications and Supplies on Tray

- 1. ½% Pontocaine Hydrochloride® (15cc: for anesthesia)
- 2. 2% Fluorescein® (15cc. Iso-Sol Co.)
- 3. 1% Atropine sulfate (15cc.)
- 4. Cyclomydril® (71/2 cc.) to dilate pupil
- 5. 2% Pilocarpine nitrate (15 cc., squeeze bottle, Iso-Sol Co.)
- 6. 30% sodium Sulamyd® (antiseptic chemotherapeutic drops)
- 7. Steroid Ointment—(Neo-Delta-Cortef,® .25% of ½ oz.)
- 8. Butyn® and Metaphen® eye ointment (1/8 oz. tube for burns)
- Normal saline flush bottle or Dacriose® (Iso-Sol Co.)

Examination and Treatment

The patient is first seated on a comfortable chair with a head rest. No matter what the disease or injury, the eye in question is examined by focusing the stand-spotlight on the eye and the eye further studied by looking through the loupe. Further magnification can be obtained by holding the magnifying lens in the path of light between the spotlight and the eyeball. This is used for fine detail work. The eyeball is grossly examined. Then Fluorescein Solution (2%)—a dye used as an indicator—is instilled (one drop) into the con-

junctival sac. This dye will only penetrate and stain the eye where epithelium is absent. After a lapse of one or two minutes, the solution is flushed from the eye with normal saline, distilled water or Dacriose (squeeze bottle). If any green stain (a "fluorescein pattern") is found on the cornea or conjunctiva it indicates the presence of surface pathology—perhaps a foreign body, abrasion, or ulcer.

Lid Complaints

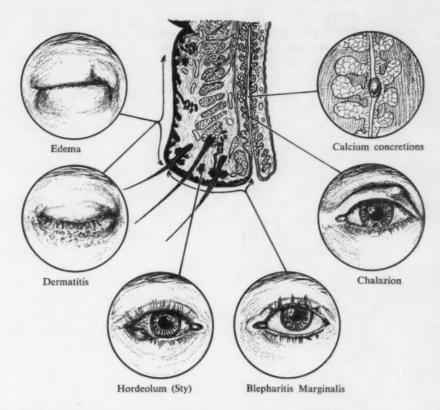
The patient may have a minor lid condition such as a stye or lashes that turn inward and irritate the cornea. If it is a stye, and pointing, the patient should be told to use plain warm water (or boric acid) compresses two or three times per day for thirty minutes each time and instill an ointment such as 2% ammoniated mercury ointment or 10% sodium Sulamyd ointment, t.i.d. This usually takes care of it with one office visit. Cilia can be extracted with the cilia forceps. There is no medication for this.

In instances in which tumors or chalazia of the lids are present, it is best that the patient be referred to an ophthalmologist. Inflammation of the lid margin (blepharitis) or even the skin of the lid anywhere may be due to bacterial infection or allergy. If the blepharitis is only mild, it may respond to any prescription containing a sulfa compound (5% sodium sulfadiazine ointment) or a steroid ointment like Neo-Delta-Cortef eye ointment, .25% 1/8 oz. In those instances in which the lid margins show the presence of much pus, it is best that material be sent to the laboratory for smear, culture and sensitivity tests.

Occluded tear ducts in newborn infants (usually with a purulent discharge) can be treated conservatively by the family doctor with chemotherapy.

Allergies

Allergic manifestations in the eyes, like syphilis, can resemble any symptom in the book. In any eye that has the symptom of itching, allergy should be suspected. Most eyelids that are allergic have a swollen, tense or wrinkled



Cross section through upper eyelid showing areas in which eyelid diseases occur.

appearance. Some cases are weepy and some cases show nothing, but simply itch. Most of these cases are caused by pollen. Cosmetics, including nail polish, are common offenders.

Every physician has seen allergies due to almost every product on the market, but it must not be forgotten that parakeets, potted plants, (African violets) and dandruff (seborrhea) can also be responsible. Dandruff may cause very severe red eyes, yet it is seldom recognized as the offender. It cannot be too strongly urged that all doctors thoroughly investigate the scalp in all cases of strange eye manifestations. Many patients with blepharitis will recover with no other treatment than a shampoo twice a week.

There are myriads of anti-allergic remedies in the form of ointments and liquids, anyone of which will probably be effective. Sometimes equally good results will be obtained with the cheaper cortisone products as with the more expensive prednisolone compounds. Usually when a lid allergy is present, it is best to use an ointment such as cortisone or hydrocortisone acetate, 1.5% (1/8 oz. tube) or Neo-Delta-Cortef, .25% (1/8 oz. tube) because it can be rubbed into the skin. When the eyeball is involved an eye drop such as cortisone or hydrocortisone suspension (2.5%) or Hydeltrasol® is recommended.

Subconjunctival Hemorrhage

When the eyeball is red, any number of pathological conditions can obtain. It is always best to observe the redness to see if it is general or localized to a certain area of the ocular conjunctiva. If there is an area that looks like fresh blood under the conjunctiva a *subcon*-

junctival hemorrhage is present. Only in rare instances is the cause due to trauma or hypertension. Of course every doctor should take the blood pressure at the first office visit but it usually will be found normal. There is no specific treatment. Warm compresses are recommended two or three times daily and it usually takes two weeks for the eye to return to normal.

Corneal Abrasion

If the entire eyeball is red, one may be dealing with conjunctivitis, iritis, glaucoma or possibly a foreign body on the cornea. A drop or two of 2% fluorescein solution should be instilled in the eye to determine if there is any ulcer or abrasion on the cornea. Since the family doctor cannot be expected to have a slit-lamp in his office to examine these eyes for a fluorescein pattern, it is hoped he will purchase a Wood's black hand lamp (ultraviolet). These lamps cost about \$34 and, in a dark room the green stain on the cornea (if there is a stain) will show up very clearly. Without such a device the corneal defect may not be seen.

If there is a foreign body on the cornea, no fluorescein solution should be used and neither should it be used after the object is removed. This is suggested so as not to introduce any bacteria even though we may think that our fluorescein solution is sterile. Instead, the eye should be anesthetized with 1/2 % Pontocaine HCl solution (1, 2 or 3 drops.) After one or two minutes, a knife needle should be applied to the object—that is under it and try to lift it upward off the globe. Sometimes this is easy; other times a rust ring will be present and will require a good deal of scraping. It must be remembered that the cornea consists of five layers, and any incision through the epithelium and Bowman's membrane into the stroma will leave a permanent scar. This cannot be prevented if the object is that far in the parenchyma of the cornea. If an object appears that deep, it is best that this case be referred to an ophthalmologist. If the object appears rather superficial and comes off fairly easy but still leaves a rust ring, the latter can be removed by using the dental burr. Sometimes it is impossible to get all the stain off and it does no harm because in time it may disappear.

Naturally after a foreign body is removed, no one wants a postoperative infection and it can happen to the best of eye specialists. One of the best ways of preventing infection is to dip the knife needle (and burr, too) in an antiseptic for a few minutes, such as benzalkonium chloride and cetyl dimethyl ammonium bromide (Cetylcide,® Cetylite Industries—Long Island City, N. Y.). With a solution like this, infection will be kept at a minimum. Rinse the blade thoroughly in sterile water before using it.

Before the patient leaves the office he should be given a prescription (or dispensed) a ¼ oz. dropper bottle containing ½ % Pontocaine HCl and 1:3000 Zephiran Chloride,® equal parts for pain with instructions to use it only as often as he needs it.

Most foreign body cases usually have a compensatory status. In all such cases a compensation card (3 x 5") should be available to keep a record of the name, date, cause, treatment, etc. By all means, the visual acuity must be taken at the first and last visits because of medico-legal reasons.

Iritis

If there is no foreign body on the cornea, the *iris* should be scrutinized very closely. Here the color of the iris is noted for muddiness, such as is found in iritis. The pupil should be round and the marginal pigment intact. In iritis, the pupil is oval or odd—shaped and usually contracted. If one watches closely, the pigment may be seen on the anterior surface of the lens capsule. The eyeball may or may not be violently red. If the patient's vision is taken it will usually be found quite defective. Two maneuvers are important at this time: intraocular pressure should be measured with the tonometer, and the eye should be studied.

In iritis (unless complicated) the intraocular pressure with the tonometer is usually normal

or low. Very few family doctors have a tonometer or even have the desire to own one. This is a grave mistake. With this instrument the general practitioner can detect early cases of glaucoma and then can refer the patient to an ophthalmologist, where treatment can be started in time to arrest the disease.

Use of a tonometer is comparable to the use of a sphygmomanometer for blood pressure determination or palpating the prostate gland. It is part of a physical examination and should be done. This brings to mind a young lady who took hundreds of aspirin tablets for headaches. The unhappy ending of this story is that one morning at 11 a. m. she had an iridencleisis operation done on the one eye because of a sudden glaucoma attack and at 5 p. m. the other eye was operated upon in a similar manner for the same condition. The family doctor can prevent this type of trouble by taking a few moments to check the pressure of the eyeball. It is very simple to do. Any ophthalmologist will be only too eager to help any doctor who is anxious to learn this diagnostic test-or any ophthalmic treatment. It will help keep the patient in his office and not in someone else's office who has no legal right to treat these medical cases. The ophthalmologist knows he is expected to help the generalist along these lines because he is being urged to do so by the National Medical Foundation for Eye Care and by his State Academy of Eye, Ear, Nose and Throat Physicians.

Practically all ophthalmologists belong to the National Medical Foundation for Eye Care and, if they do not, they are making a grave mistake. The same is true of general doctors of this country. They too, can become members and all are invited to join and help make medicine strong. This is the only way to prevent the non-medical practitioner from making inroads into the practice of medicine.

Our state societies are using every legislative means possible to protect the status of medicine. This unfortunate feuding between the two groups treating eyes in this country could be stopped immediately if the non-medical group would desist from excursions into

a field for which they are not trained. They should have no legal right to do anything except refract. They are not qualified to treat eyes; that, is the job for the family doctor or ophthalmologist. As soon as this group recognizes its limitations and punishes its wayward members, then harmony will prevail again just as it did before.

If all the signs and symptoms of iritis are present, it is best to refer the patient to an ophthalmologist. This is because slit-lamp studies, field tests, etc. should be done—possibly hospitalization—and this is not expected of the family doctor. There is no doubt that the patient would rather have it that way and will respect the family doctor for having made the diagnosis.

If the intraocular pressure is elevated (with or without a red and painful eye) there is no doubt that the diagnosis is glaucoma. The ophthalmoscope should be used to examine the fundus. An ophthalmoscope with good luminosity is recommended. Welch-Allyn Co., now has one that is charged on house current and a good source of light is available at all times. If the nerve head (optic nerve) shows cupping along with increased intraocular pressure diagnosis for advanced glaucoma is established. A case of this type should also be referred to an ophthalmologist for further studies (Fields, Gonioscopy, etc.) or possible operation.

The use of 1% atrophine sulfate should be touched upon here because of its usefulness and dangers. This drug should not be instilled in the eye after every foreign body is removed. Once it is instilled, it requires fourteen days for the effect to wear off and this imposes a hardship on the patient, especially if he must return to work and must use his eyes. This drug is reserved for sore, serious eyes (iritis, never glaucoma) and its use should be looked upon with respect.

When an examination of the eye grounds is desired, the pupil should be dilated with a mydriatic (Cyclomydril,® etc.). This should be done only after the tension was taken and found normal. After the examination, 2% solution of pilocarpine nitrate is instilled in the

eye to return the pupil to its normal state, usually in several hours.

When the tension is normal in the presence of red eyes and no ulcers are present on the cornea, it is possible that only a simple conjunctivitis is present. The pupils in these cases are usually normal in size and movability and the cornea is clear. Sometimes the hand ultraviolet light will demonstrate small phylectennlar ulcers at the corneal limbus. These cases are prevalent in a general doctor's practice and are usually viral in nature — although some think that nutrition plays a part. Vitamin products are indicated and a drop containing a steroid with an antibiotic (Chloromycetin® with Hydrocortisone) usually helps considerably. If no ulcers are present it is possible that the diagnosis is Pink Eye.

Pink Eye can be caused by any of the bacteria, but more especially by the Kochs-Weeks bacillus. This is characterized by a very pink flush of the ocular conjunctiva and most times with a concurrent purulent secretion. Numerous remedies cure this condition among which are penicillin solution 1000 units per cc. in normal saline.

Occasionally, the patient may complain of marked tearing, pain and redness of the eyeball, no foreign body is present, the pupil is normal and the iris quiet. This eye should have 2% solution of fluorescein instilled and 1 minute later flushed with saline, distilled water or Dacriose. A stain may be seen on the cornea signifying an ulcer or ulcers and they can be seen much more clearly, as said before, with a Black light (ultraviolet).

The etiology of corneal ulcers is difficult to determine and almost any infection or toxic agent is responsible. Most times no cause can ever be found even after exhaustive tests. Only in extreme cases should these people be hospitalized, but the patient should be told that numerous tests and medications are necessary to diagnose and treat the condition. If in doubt, the tension should be taken very lightly so as not to disturb the ulcer. As far as medication is concerned, these ulcers, especially those situated in the center of the cornea, do not

perform well on steroid drops and ointment. This is particularly true in those ulcers called "dendritic," which have a branched appearance. Such drugs tend to accentuate the seriousness of the ulcer and some disastrous results have been reported. These eyes should be dilated with 1% atropine sulfate t. i. d. and an antibiotic such as Achromycin® in oil or Chloromycetin four times a day. There is a difference of opinion about patching. If a patch is not used, then dark glasses should be used at all times. It might be wise to give an injection of penicillin daily plus a Chloromycetin capsule (250 mgms.) four times daily for one week. If after one week the condition shows some improvement and the patient is comfortable, it is quite likely that you, the family doctor, can carry on from there. If the reverse holds true, then it is best that the patient be referred to an ophthalmologist for his evaluation. There is no condition more disturbing to treat than ulcers of the cornea.

There are many other conditions of the eye that are not being mentioned because they fall in the realm of the specialist and should not be described here. Burns of the lids and orbit are similar to burns elsewhere and are treated in the same manner with ointments and patches if necessary. It is felt, however, that the generalist should make good use of the Snellen Chart and every patient with any head complaint should have his visual acuity taken.

The ophthalmoscope should be freely used. If visualization of the fundus is bad, then it can be made easy by instilling a mydriatic (but don't forget to follow with a miotic). Not too long ago a patient was seen who had vague visual disturbances, but who was being treated by the family doctor for arthritis. At no time did the doctor examine his urine or his fundi. Ophthalmoscopic examination showed the retina covered with minute hemorrhages plus many exudates around the macula, the area of most acute vision. It was quite embarrassing to send the patient back to his doctor to be treated for diabetes mellitus.

One little girl, age 3 years, was told by a non-medical practitioner that her eye would

straighten when she became older. The family not being satisfied asked for study by an M.D. eye specialist and the latter found, when the pupil was dilated with a mydriatic, that the girl had a retinoblastoma in the one fundus. This presented a serious problem because with an ophthalmoscope it is difficult to say whether this is a true retinoblastoma or a false one (pseudoglioma). Should the eye be removed, or not, that is the question. If it were certain that the tumor was the pseudo-type it would be safe not to operate. If it were the true type the child would be dead in a few years. So the safest thing to do in these cases is to enuccleate the eye and let the pathologist make the diagnosis. This story had a happy ending because the tumor proved to be the pseudoglioma type and the girl is living, well and happily married and, incidentally, wearing her glass

Under the age of 2 years, all children with strabismus (crosseyes) should have their fundi studied to be on the alert for any pathology. From age 2 years upward the child should be referred to the ophthalmologist who will endeavor to straighten the eye with refraction, patching or atrophinizing the good eye.

In newborn infants when a study of the fundus is required, it is best that an M.D. eye specialist be called on consultation.

It may be a case of retrolental fibroplasia and this condition is never simple to diagnose. In retinal changes due to pregnancy, it may be a trying moment for the family doctor or obstetrician when he has a patient with disturbed vision and he does not know whether to terminate the pregnancy or not. Just recently such was the case in two women in the same hospital within the same month. Both women were examined by dilating the pupils with a mydriatic and both women presented a central serous retinopathy. Chloromycetin® succinate 1 gm., I.M., Q. eight hours was given and 4 mgms. Medrol®, orally, q.i.d. and in forty-eight hours both women regained their sight. The retinopathy cleared up in two days and about one month later both women had full-term normal babies.

A headache is not always associated with primary pathology in the eye, but it is the family doctor's duty to look into that eye and at the disc to see if it is elevated (chokededematous) or not. If he examines enough normal discs he will recognize one when it is choked. When he sees a choked disc he should suspect intracranial pathology (tumor, aneurysm, etc.) and send the patient to a neurological surgeon. If not certain of the diagnosis, it is in the best interest of the patient to refer him to an ophthalmologist for field studies, etc. to further limit the diagnosis.

The fundus and external examination can be normal in these headache cases, but the headaches may be due to an error of refraction. The family doctor should ask how long it has been since the last spectacle change and also check the visual acuity (should be 20/20) of each eye.

Every eye doctor knows that headaches, dizziness, nausea and vomiting can be caused, many times, by a needed change in single lenses or bifocals. These errors of refraction represent the greatest volume of cases that are seen in his office-and he would certainly see more to them if the family doctor would take the time to do visual acuity tests and take a careful history. He should then refer the patient to an ophthalmologist M.D. for refraction. This certainly is good public relations and many times keeps the patient from spending money for spectacles when they are not indicated. Every week, ophthalmologists see patients with cataracts who were given glasses by someone other than an M.D. and the patient can see no better than he or she could before the change. Obviously the patient needs an operation (or treatment) and not glasses. This is occurring every day because pathology has not been recognized and the economic motive is too strong to resist selling glasses.

The same economic factor enters into the selling of contact lenses also. These lenses at this writing are only given to the younger age group (under 40 years)—those people requiring single vision lenses. Bifocal contact lenses have not been perfected as yet, but some un-

scrupulous persons are selling them and getting away with it. It is very seldom that patients under 14 years-of-age are considered for examinations and yet some fitters are giving contact lenses to anyone who has the \$150 to \$250 to pay for them. One woman was recently given a pair of bifocal contact lenses costing her \$420 and she cannot wear them. She feels sick about the whole affair, but there is nothing she can do about it. It is said that such transactions exist and even though this subject is a bit remote from the practice of medicine, the problem is still with us and it affects the many ophthalmologists who are doing ethical contact lens work.

Certainly this creates the worst type of public relations in a small community and, if some form of legislation is not soon adopted to correct these evils, it appears that some fitters (anyone can fit them) will have a hay day for some time to come. Many serious eye injuries have resulted from the improper fitting of these lenses and, in Philadelphia, Pa. alone, in one eye hospital, four eyes were enucleated last year because of infection, ulceration and total

loss of the eyeball. This should be enough evidence to convince our legislators that contact lens fitting is a serious business and should only be performed by trained medical personnel under the direction of M.D. eye specialists. If a fitter these days has a patient with a sore eye as the result of contact lens pressure, this patient must seek M.D. eye care at his own expense. If such would occur for ophthalmologist there would be no added expense because the ophthalmologist, would not allow the eye to become irritated in the first place. This business is like hypnosis: at one time everyone who wanted to, could be a hypnotist. But today, hypnosis is recognized by the American Medical Association as an integral part of medicine and removed from the class of quackery. The same should happen to contact lens fitting so as to make it a recognized form of ophthalmology (or Medicine). This would make our kerato-conus cases and those with high refractive errors ever grateful for what was done for them at a reasonable cost, and make them feel that they are dealing with someone who they can trust.

Summary

- 1. The eye is an integral part of the body, should be given more attention by the family doctor during his routine examination.
- 2. A Compendium of Post Graduate Ophthalmology is submitted to help the doctor to render better service to his patients.
- 3. Referrals should be made only to ophthalmologists (M.D.) who are taught to recognize pathology and thus help the patient both as to time and cost.
- 4. Contact lens fitting should be under the control of the medical profession, because of the pathological conditions that sometimes result from wearing them.
- 5. All this adds up to better public relations because, when medicine is strong, ophthalmology can instill trust in patients and that is what they expect from their doctor.

71 High Street



STOP AT CORONER'S CORNER . . .

Read the stories doctors write of their unusual experiences as coroners and medical examiners. SEE PAGE 45a.

Principles of

DERMATOLOGIC DIAGNOSIS

MORRIS LEIDER, M. D. New York, New York

PART II: THE DERMATOLOGIC EXAMINATION

- Gross physical examination of the skin
- A table of primary (elementary or fundamental) cutaneous lesions
- A table of special cutaneous lesions
- A table of secondary cutaneous lesions
- A table of descriptive words for various characteristics of cutaneous lesions
- A table of dermatoses that have characteristic primary or special and/or secondary lesions and favorite sites of predilection
- A table of regions and of common or important dermatoses that have a strong tendency to localize on them

the skin: One of the most futile and hypocritical things an adept in dermatology can do is to require an undergraduate student of medicine or a non-dermatologic colleague to describe precisely and extemporaneously what he sees on the skin. Descriptions of cutaneous morphology demand a method and a vocabulary that are not so obvious or in the general trend of medical terminology. To demand meaningful description from an untrained observer is as unreasonable as the untrained observer's vanity in thinking he has said all that is necessary if he pronounces a dermatosis to be erythematous and maculo-papular.

Gross examination of the skin is performed by the senses of sight, touch and smell. Such examination may be as simple a matter as a glance, feel or sniff, or it may have to be a fairly prolonged and repeated observation and cogitation. Visual examination obviously requires a good artificial lighting, with exposure of the skin up to nakedness and frequently painstaking close scrutiny and stand-off survey of many square feet of skin that is not flat but contoured in a complicated fashion and adorned with special features like hair, nails, pores, pilo-sebaceous ostia, ridges, furrows, folds, and wrinkles. The accessible mucous membranes (lips, mouth, anus and genitalia) may require inspection.

Dr. Leider is Associate Professor of Dermatology and Syphilology, New York University Post-Graduate Medical School.

Much of the material in this article derives from the author's book, Practical Pediatric Dermatology and a work in preparation, A Practical Introduction to Modern Dermatology. The use of both sources is by permission of The C. V. Mosby Company.

The utterly nude condition is ideal for examination, but it is not always practicable or comfortable enough for patients and examiners. Fortunately it is not always necessary to examine in complete nudity because many conditions are strictly limited to select locations. Usually only actually involved portions of the skin need be examined and a patient's forceful assertion that the rest of the skin is clear may be taken in good faith. When this is not credible from the nature of the condition as revealed or when complete examination is deemed necessary for any other reason, serial examination from vertex to toes may be done in step by step disrobement and redressing that avoids the effect of strip tease. Even under the best circumstances of good lighting and adequate exposure, examination is not accomplished without some discomfort resulting from the twisting and turning of patient and examiner.

Assuming that all difficulties of examining can be overcome, what does one seek in a dermatologic examination? By eye, one tries to determine the types and gross characteristics of the lesions and their distribution; with the fingers and simple instruments like a magnifying glass, diascope, curette and probe one tests for more characteristics of lesions; and with the nose one appreciates odor if present. Conventionally, cutaneous lesions are divided into categories of primary (fundamental or elementary), special, and secondary types because most cutaneous lesions have stereotypic gross appearances and courses of evolution that per-

TABLE IV PRIMARY (ELEMENTARY OR FUNDAMENTAL) CUTANEOUS LESIONS

Lesions designated as primary, elementary or fundamental are abnormal appearances that are usually the first grossly recognizable, or the most characteristic, manifestations of some diseases.

TYPE

The MACULE is an abnormality of color of skin that is neither appreciably raised above or depressed below the level of the skin, i.e., a macule is a flat, visible but not a palpable, abnormality. The change of color may be red, white, blue, brown, black, yellow, purple, or shades and combinations of color (polychromatic). They may arise from inflammation (vasodilatation and mild edema), pigmentary changes (melanin and bile, blood or adventitious materials) and sometimes non-inflammatory cellular collections (some nevi). The size of macules is generally of the order of a coin, split pea or smaller. Larger areas of discoloration may require another descriptive word like a PATCH (of erythema, pigmentation, depigmentation, etc.).

The PAPULE is a solid elevation on the skin that may be of normal or abnormal color of the skin and of the size of a pea or less. Papules are both visible and palpable. They may consist of edema and inflammatory infiltrates or non-inflammatory cellular collections.

Nodules, Tumors and Plaques are also solid elevations on the skin but larger in size than papules. Nodules and tumors are more or less rounded whereas plaques are flatter and may be of irregular geometric shape. Their composition is as for papules.

CONDITIONS IN WHICH THE TYPE OCCURS

Freckles (brown)

Vitiligo (white)

First degree burns (red)

Pediculosis pubis (taches bleues)

Tattoos (any color)

Syphilis (copper, ham or salmon colored palmar and plantar lesions of secondary syphilis)

Lichen planus (red, matchhead size)

Moles and small neoplasms (brown, flesh colored)

Lichen chronicus simplex

Syphilis (papules of secondary syphilis)

Erythema nodosum

Neoplasms

Fixed drug eruptions

Syphilis (tertiary lesions, e.g., gummas)

mit them to be so categorized. Such division is useful educationally and for purposes of description and communication, but the dynamic or changing nature of cutaneous processes should not be obscured by a rigidity of classification. The subtle nature of the genesis and later evolution of cutaneous lesions cannot be written out briefly. Tables IV, V, and VI summarize some data about primary, special and secondary lesions. Nothing, however, substitutes for repeated personal clinical exercises in trying to determine their nature on the living patient.

Some primary or elementary lesions, most special lesions, and the characteristic evolution of primary into secondary forms are highly diagnostic. When this is so it is because such lesions have distinctive characteristics of progression, surface characteristics, shape, color, distribution, etc. Very often, however, these factors in themselves are not sufficient for definitive diagnosis and may permit merely a differential diagnosis of several possibilities. In some dermatoses that have primary elements that conform to the classification and definition given in the tables, typical appearances may not be seen at the time of presentation. It may be too early or too late to recognize them in all their typicality; at time of viewing lesions may not be clearly developed or may be overdeveloped so that they cannot be nicely labelled macular, papular, vesicular, pustular, etc. In such cases one is forced, and one is permitted for purposes of notation and communication,

The Vesicle is an elevation on the skin that has a fluid (largely serous) content and is of the size of a pea or less. Its position may be intra- or subepidermal. Vesicles are largely inflammatory.

The BULLA or BLEB has the same characteristic as the vesicle as to content and pathogenesis but is larger in size. BLISTER is a generic term for either a vesicle or bulla, more used by the laity, but still in good form for physicians.

The Pustule is an elevation of the skin that has a purulent content and is of the size of a pea or less. Larger collections of pus are termed Furuncles, Abscesses or Carbuncles. These processes are inflammatory.

The Wheal, Hive or Urtica is another solid elevation of the skin that may be as small as a matchhead or larger than a palm. Wheals are palpably edematous, frequently surrounded by a zone of erythema (flare) and are relatively evanescent (in the course of minutes to hours). In complete involution wheals leave no trace. Their pathogenesis is inflammatory.

Herpes simplex and zoster Contact dermatitis Pompholyx Some fungous infections Miliaria crystallina

Erythema multiforme bullosum Pemphigus vulgaris Dermatitis herpetiformis Second degree burns Epidermolysis bullosa

Acne vulgaris

Smallpox
Pyodermas
Miliaria rubra
Drug eruptions caused by iodides and bromides

Urticaria, acute, chronic, cholinergic
Insect bites and stings
Angioneurotic edema
Dermographia
Urticaria pigmentosa

TABLE V SPECIAL CUTANEOUS LESIONS

Special lesions are also primary or elementary in the sense given above but carry the connotation of "special" because they are of peculiar structure of odd mechanism or limited to a few diseases.

TYPES

The COMEDO OF BLACKHEAD is a collection of sebum and keratin lodged in the pilosebaceous follicle with a black dot of oxidized fat visible at its top.

The MILIUM or WHITEHEAD is a papule of the size of a pinhead or millet seed which contains either sebaceous or cornified materials. It has no opening or communication with the skin surface.

The Burrow, Cuniculus, Gallery, Passage, Tunnel, or Channel is an excavation or tract in the epidermis that may be short and small or long, large, and serpentine.

The Scutulum or shield is a shallow cup- or saucer-shaped crust.

TELANGIECTASIAS are grossly visible dilations or new formations of small (end) vessels.

HEMORRHAGES are extravasations of blood which may be further subclassified as petechiae, purpuras, ecchymoses, vibices, and hematomas.

CONDITIONS IN WHICH THE TYPE OCCURS

Acne vulgaris

Acneform dermatoses caused by tars and halides

Acne vulgaris

Sometimes around the healed bullae of pemphigus, epidermolysis bullosa and some other bullous diseases

Zoonoses

Scabies

Larva migrans (creeping eruption) Myiasis

Favus

Spider nevus

Rosacea

Radiodermatitis

Trauma

Some drug eruptions

Many systemic and other organ diseases, e.g., blood dyscrasias, endocarditis, etc.

to use compromises like maculo-papular, papulo-vesicular, papulo-pustular or vesiculo-pustular, and also lesions that are ordinarily classified as primary may at times be secondary as, for example, when a pustule develops upon a comedone or a vesicle upon a wheal. It is necessary to be nimble in the mind as well as with the eye to understand what is happening on and in the skin.

In addition to recognition of the general nature of a lesion, it is almost always necessary to attach further description as to topography, shape, configuration, consistency, content, size and other information that may be instructive. The list of words in Table VII are useful to convey data of this sort. They do not exhaust all the linguistic possibilities and highly individual flights of metaphor and other felicitous literary fancy are possible.

After recognition of the primary or special and secondary lesions of a dermatosis and their fine characteristics, the sites of predilection of process yield diagnostic information. Within limits, some dermatoses almost always localize in some places and almost never appear in other places. Tables VIII and IX give some information of this sort about the commonest dermatoses.

TABLE VI SECONDARY CUTANEOUS LESIONS

Secondary lesions are cutaneous appearances that evolve or develop as progressions from primary lesions or from adventitious events like scratching, irritation and secondary infection of primary lesions.

TYPES

OOZING (WEEPING) is the wetness that results from exudation of serum in processes that are attended by vesiculation and rupture of blister roofs, or in any other process that severs the continuity of the stratum corneum of the epidermis. It is obviously related to inflammation and trauma.

CRUSTING and SCABBING result from the coagulation of serum and blood on the surface of the skin.

EXCORIATION describes superficial or deep excavations of the skin caused by scratching or picking of the skin or its lesions. Excoriation is, then, fundamentally an artifact.

SCALING refers to visible exfoliation of the epidermis. It is in the main a consequence of inflammation.

ULCERATION describes loss of substance from above downward to a depth below the epidermis and with continuous death of tissue or undue delay of repair. Ulceration is a development upon severe inflammation or trauma.

SCARRING or CICATRIZATION describes the replacement of lost substance by fibrous tissue. It is an end result of pathologic process.

Atrophy is the thinning out or diminution of tissue. Usually structure or arrangement is normal. Cell size and total size is characteristically smaller. Atrophy is usually an end process like scarring but it may at times be primary as in congenital and dysplastic processes.

LICHENIFICATION describes papular thickening of the skin with accentuation of its surface markings. It is an aspect of inflammation.

PIGMENTATION, when used to denote a secondary lesion, refers to an increase in melanin. Pigmentation is usually a consequence of inflammation or subtle non-inflammatory dysmetabolism, but may have primary, or special lesion aspects.

CONDITIONS IN WHICH THE TYPE OCCURS

Most vesicular and bullous dermatoses Abrasions

Pyodermas

Atopic dermatitis (infantile form)

As for oozing

Pruritic dermatoses

Psychopathies (neurotic excoriations, dermatitis artifacta, delusions of paraaitosis)

In the involution of many macular, papular, vesicular and pustular dermatoses

Some pyodermas

Trauma, especially if continuous

Many expressions of tuberculosis, syphilis and other granulomatous diseases

Following ulceration, burns or other loss of substance

In many dermatoses of unknown cause like scleroderma and acrodermatitis chronica atrophicans

In many congenital, hereditary or dysplastic processes

In many conditions where there is loss of substance.

Chronic pruritic conditions

Atopic dermatitis (particularly the adult form)

Lichen chronicus simplex

Frequently in association with scarring, other forms of healing and with lichenification

TABLE VII A TABLE OF DESCRIPTIVE WORDS FOR VARIOUS CHARACTERISTICS OF CUTANEOUS LESIONS

FOR DISTRIBUTION

Localized or generalized Symmetrical or asymmetrical Isolated or grouped Unilateral or bilateral Segmentary or zosteriform Regional or scattered On hairy areas On glabrous areas On flexor or extensor surfaces Around hair follicles Around sweat pores On exposed areas On covered areas Along lines of cleavage Along course of nerves, blood vessels, lymphatics Spotty Disseminated On specific regions (scalp, brow, nuchal area, chest, back, inframammary areas, extremities, palms, soles, fingers, toes, pre- and postauricular areas, periorificial [circumoral, periorbital,

perianal], etc.)

FOR SIZE

Pinpoint Pinhead Match head Palmsized Thumbnail sized Egg-sized Fruit-sized (grape, lime, lemon, apple, orange) Coin-sized (penny, nickel, dime, quarter, half dollar, silver dollar) Nut-sized (filbert, walnut, almond) Lentil-sized Bean-sized Pea- or splitpea-sized Seed-sized (millet, poppy)

Guttate

Punctate

(drop size)

(dot size)

FOR SHAPE AND SURFACE

Acuminate (pointed) Annular, circinate, or circular Cobble stone Concave, excavated, or crateriform Conical, hemispherical, or convex Corymbiform (a central lesion with satellites) Digitate Discoid Filiform Flat (plane) Geographic Guttate (drop-shaped) Gyrate Herpetiform Horseshoe or kidney shaped (reniform) Moniliform (beaded) Nodose Nummular (coin-shaped) Obtuse Ocreaform (armored) Orbicular (moon shaped) Oval Polycyclic Polygonal Punctate (point shaped) Reticular (woven) Rolled (borders) Serpentine or serpiginous (creeping) Striated

Verrucous (warty)

FOR COLOR

Apple jelly
Black
Blue
Brown
Buff
Café au lait
Chocolate
Copper
Cyanotic
Fawn
Golden
Gray
Green
Honey colored

Lilac
Pearly
Pink
Polychromatic
Purple
Raw ham
Red
Rose
Saffron
Salmon
Shiny
Silvery

Slate Straw Sulfur Vermilion Violaceous Waxy White

Yellow

Skin colored

FOR CONSISTENCY

Boardlike Boggy Bony Brawny Cartilaginous Compressible Corded Dense Doughy Elastic Flabby Flaccid Fluctuant Hard Hide-bound Indurated Infiltrated Knobby Lardy Noncompressible

Rough

Smooth

Spongy

Stony

Supple

Tense

Tough

Velvety

Soft

FOR SCALES CRUSTS & SCABS

Adherent
Amiantaceous
(asbestos-like)
Attached
Centrally
Completely
Firmly
Loosely
Partly
Peripherally
Bloody
Brittle

Carpet tack under-surface

Collarette-like Dry Fatty

Flaky
Friable
Greasy
Horny
Imbricated
Micaceous
Moist
Ostraceous
Powdery
Purulent
Rupial (filthy)
Scutular (shield-like)
Sigillate (seal-like)

Silvery Stratified "Stuck on" Translucent Waferlike

TABLE VIII SOME DERMATOSES THAT HAVE CHARACTERISTIC PRIMARY, SPECIAL AND/OR SECONDARY LESIONS AND FAVORITE SITES OF PREDILECTION

DERMATOSES	PRIMARY OR SPECIAL LESIONS & SPECIAL CHARACTERISTICS	SECONDARY LESIONS	SITES OF PREDILECTION
ACNE VULGARIS	The comedo	Consequences of in- flammation of come- dones: papules, pus- tules, scars	Face, chest, back, neck and shoulders
Acrodermatitis Chronica atrophicans	Patches of erythema, and plaques of edema	Atrophy ("cigarette paper" wrinkling)	Around the knees
ALLERGIC ECZEMATOUS CONTACT DERMATITIS	Patches of erythema, papulovesicles and bullae	Oozing, crusting, scaling, sometimes lichenification and pigmentation	Anywhere that eczematogenic allergens can reach, especially, in the nature of things, exposed areas like face, arms and legs. Unusual on palms and soles
APHTHAE AND APHTHOSIS	A macule of erythema and a rapidly evolving papulovesicle	Ulceration	Mouth, genitalia, eyes
Atopic dermatitis	Juicy papules and patches of erythema	In the infantile phase, oozing and crusting are common; in the child-hood phase oozing and crusting is common enough but the scaling and lichenification of the adult phase begins to appear	Face, flexures (antecubital and popliteal fossae)
BITES AND STINGS OF INSECTS	Macules of erythema at the point of the bite and sting followed by a wheal or a vesicle	None unless secondary infection and scarring from scratching super- venes	Anywhere, es- pecially exposed areas
Burns, thermal	First degree: patches of erythema. Second degree: vesicles or bullae. Third degree: loss of substance.	First degree: scaling Second degree: oozing, crusting, scaling Third degree: ulceration, scarring	Anywhere, especially exposed areas
Carbuncles	Multiple abscesses joined by sinuses	Oozing, crusting, ulceration, scarring	Anywhere, especially face, nape of neck
DERMATITIS HERPETIFORMIS	Macules of erythema, wheals, vesicles or bullae	Crusting, scaling, excoriation, scarring	Back, arms, legs, generalized

DERMOGRAPHISM	Wheals	None	Sites of friction
			and pressure
DRUG ERUPTIONS	Depending upon type, any primary form is possible	Depending upon type, any secondary form is possible	Depending upon type, imitation of dermatoses of non- drug cause
Естнума	Pustules	Crusted Ulcers	Legs, arms
EPIDERMOLYSIS BULLOSA	Bullae	Scarring	Hands, feet, elbows, knees
ERYTHEMA MULTIFORME BULLOSUM EXUDATIVUM	Macules of erythema and polychromatic for- mations (iris lesions), plaques of edema, grouped vesicles (herpes iris) and bullae	Oozing, crusting and scaling	Sides of neck, arms, mouth, generalized
ERYTHEMA NODOSUM	Nodules of inflammation	Usually none	Extensor surface of legs
EXUDATIVE DISCOID AND LICHENOID CHRONIC DERMATOSIS	Macules of erythema, papules and vesicles	Excoriations, scabs, scars	Trunk, extremities, generalized
FAVUS	The scutulum	Scaling, atrophy, scarring	Scalp, trunk, arms, legs
FOLLICULITIS	Pustules	Oozing, crusting, scaling	Face, scalp, legs
Fox-Fordyce disease	Papules of inflammation (in the apocrine-bearing areas)	Excoriation	Axillae, pubes
Freckles	Macules of pigmentation	None	Face, back
Fungus infections, superficial, of glabrous skin	Macules and patches of erythema, vesicles	Oozing, crusting, scaling	Scalp, trunk, inter- triginous areas, webs of digits
Furunculosis	Abscesses	Oozing, crusting, ulceration	Anywhere, es- pecially axillae, face, trunk
Granuloma annulare	Papules or nodules (in a circular arrangement)	Usually none, sometimes atrophy	Hands, feet
Granuloma pyogenicum	A papule or tumor	Crusting, scabbing or hemorrhage	Anywhere, espe- cially face
Herpes simplex	Vesicles (in a group formation)	Oozing, crusting, scaling	Lips, oral, genital, anywhere

TABLE VIII	DERMATOSES	PRIMARY OR SPECIAL LESIONS AND SPECIAL CHARACTERISTICS	SECONDARY LESIONS	SITES OF PREDILECTION
TAI	Herpes zoster	Vesicles (in group formation along lines of peripheral sensory innervation)	Crusting, scaling, some- times scarring	Any neural segment or dermatome
	HYDROA ESTIVALE	Papules of inflammation	Crusting, scarring (varioliform)	Exposed portions, especially face, arms, legs
	Impetigines	Vesicles and bullae (very superficial or shallow)	Oozing, crusts ("stuck- on"), scaling	Anywhere, espe- cially face, arms, legs
	Intertrigo	Patches of erythema	Oozing	Intertriginous spaces, especially axillae, groin, inframammary and intergluteal areas
	KERATOSIS FOLLICULARIS (DARIER'S DISEASE)	Papules	Scaling	Upper back, chest
	KERATOSIS PILARIS	Papules (around hair follicles)	Scaling	Outer aspects of arms and legs
	Larva migrans	Burrows (channel, cuniculus, passage, tract)	Excoriation	Extremities, buttocks
	LEPRIDS	Macules of erythema and depigmentation, nodules and tumors	Atrophy and scarring	Face, arms, trunk, extremities
	LEUKOPLAKIA	Macules or patches	Exfoliation	Mouth, genitalia
	LICHEN CHRONICUS SIMPLEX	Papules	Lichenification and pigmentation	Outer malleoli, arms below elbows, nape of neck, female genitalia, scrotum, upper thighs
	LICHEN NITIDUS	Papules (shiny)	None	Trunk, penis
	LICHEN PLANUS	Papules (shiny, polygonal, dusky)	Lichenification, pigmentation, sometimes atrophy	Flexor surfaces of arms, lower back, thighs, generalized
	LUPUS ERYTHEMATOSUS	Macules and patches of erythema	Scaling	Face
	Measles	Maculopapules	Scaling	Trunk, face
	MILIARIA CRYSTALLINA	Vesicles	Scaling	Trunk
				MEDICAL TIMES

Miliaria rubra	Papulo-pustules	Crusting, scaling	Trunk (especially upper chest and back)
MOLLUSCUM CONTAGIOSUM	Papules (delled)	None	Trunk, face, arms
Могрнеа	Patch (of erythema and depigmentation)	Atrophy	Trunk, arms
Mycosis fungoides	Erythema, tumors	Ulceration	Trunk, arms, legs, face
NEOPLASMS	Papules, nodules, tumors	Variable from none to ulceration and scarring	Anywhere (depending on type)
Nevi	Macules, papules, nodules, tumors	Usually none	Anywhere (depending on type)
Nummular eczema	Vesicles (in circinate, coin-sized groupings)	Oozing, crusting, scaling	Arms, hands
Panniculitides	Nodules and tumors	Usually none or atrophy and scarring	Anywhere, espe- cially arms, legs, trunk
PARAPSORIASIS	Patches (of erythema)	Scaling	Trunk
PEDICULOSES	Papules and wheals	Pustules and excoriations	Neck, pubis, trunk
Pemphigus	Vesicles and bullae	Oozing, scaling	Generalized, espe- cially mouth
PITYRIASIS ROSEA	Macules of erythema (in lines of cleavage)	Scaling (from edges toward center)	Trunk (limits of cleavage) and extremities
Ромрногух	Vesicles	Scaling	Hands, feet
Prurigines	Papules	Excoriation	Arms, legs, back
Psoriasis	Macules and patches of erythema	Scaling	Anywhere (face rare)
Sarcoidosis	Nodules and tumors	None, sometimes scarring	Anywhere
Scabies	Burrows (galleries, cuniculi)	Excoriations, scabs	Penis, waist, but- tocks, anterior axillary lines, wrists, ankles
Scarlet fever	Macules and patches of erythema	Scaling	Generalized on trunk

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=	DERMATOSES	PRIMARY OR SPECIAL LESIONS & SPECIAL CHARACTERISTICS	SECONDARY LESIONS	SITES OF PREDILECTION
TABLE	SEBORRHEIC DERMATITIS	Patches of erythema	Scaling (greasy)	Scalp, center of face, center of chest, back, axillae, intertriginous areas, groin
	Syphilids	Vesicles (in infants), macules, papules, nodules (in adults)	Oozing, crusting, scaling, ulcers	As per stage-type
	TRAUMAS	Macules and patches of erythema, wheals, hemorrhages, tumors	Oozing, crusting, ulcers, scars	Variable, anywhere
	Tuberculoderms	Macules and patches of erythema, vesicles, pustules, nodules, tumors	Crusting, scaling, ulcers, scars	Variable—type
	URTICARIA acute angioneurotic cholinergic chronic	Wheals, sometimes vesicles (strophulus)	None or sometimes scaling and transient (hemorrhagic) pig- mentation	Anywhere
	URTICARIA PIGMENTOSA	Papules, wheals	Pigmentation	Trunk
	Varicella	Macules of erythema, papules, vesicles	Crusts, ulcers	Generalized, face
	VARIOLA	Pustules	Scars	Generalized, face
	VERRUCAE	Papules, nodules, tumors	None	Anywhere, particu- larly fingers, hands, soles
	VITILIGO	Macules and patches (of depigmentation)	None	Anywhere
	Xanthomatoses	Papules, nodules, tumors	None	Depending on type—specify

TABLE IX REGIONS OF THE BODY AND COMMON OR IMPORTANT DERMA-TOSES THAT HAVE A STRONG TENDENCY TO LOCALIZE ON THEM

SCALP

DERMATOSIS AND DIFFERENTIAL HINTS

ACNE MILIARIS NECROTICA

Scattered, perifollicular, crusted, intensely pruritic papulopustules.

ALOPECIAS

Areata

Circumscribed patches of complete baldness. "Exclamation point" hairs in defluvium. No atrophy of skin.

Artificial; Cicatrizing

As a result of lupus erythematosus, severe pyoderma and some fungous infections; also with atrophic processes of unknown cause, particularly a characteristic diamond shaped area of baldness at the vertex.

Hereditary or Premature

Patterned baldness in men; general thinning in women.

Syphilitic

"Moth-eaten," patchy thinning on parietotemporal region.

Total

As an extension of the areate form.

EXANTHEMATA

The papules, vesicles and pustules of chickenpox and smallpox affect the scalp.

FUNGOUS INFECTIONS (TINEA CAPITIS)

Patches of mild inflammation with broken hair shafts; usually found in children; rare in adults; common forms fluoresce under Wood's light; kerion is a relatively uncommon, severely inflamed form of tinea capitis.

LUPUS ERYTHEMATOSUS

Discoid patches of inflammation resulting in atrophy and hair loss.

NEOPLASMS AND NEVI

Mostly benign cellular and vascular tumors.

PEDICULOSIS

Nits, adult lice, excoriations and secondary infection, especially in occipital locations.

PSORIASIS

Erythema and heavy scaling; marginal localization is characteristic.

PYODERMA

All grades of process from superficial impetigo through folliculitis, furunculosis and carbunculosis to dissecting forms (abscedens et suffodiens).

SEBACEOUS CYSTS

Pea-to-egg-sized tumors containing sebaceous or atheromatous material.

SEBORRHEA AND SEBORRHEIC DERMATITIS

Excessive oiliness or dryness; flaking or scaling; erythema and pruritus.

VERRUCAE

Filiform or digitate epidermal hyperplasias.

FACE

ACNE AND ACNEFORM DERMATOSES

Comedones and the inflammatory consequences upon them: papules, pustules, cysts, scars.

ALLERGIC ECZEMATOUS CONTACT DERMATITIS

Erythema, papulovesiculation, oozing, crusting and pruritus from sensitization and exposure to eczematogenic allergens (e.g., in cosmetic, metals).

ALOPECIA AREATA

Patches of baldness in the beard areas of men.

ANGIONEUROTIC EDEMA

Giant hives especially in perioral and periorbital locations.

ATOPIC DERMATITIS

Erythema, papulation, oozing and crusting in children; erythema and liehenification in older subjects; intense pruritus and related excoriation.

DERMATOSIS AND DIFFERENTIAL HINTS

TABLE IX

BITES AND STINGS OF INSECTS

Erythema, papules or wheals, sometimes vesicles, around a central punctum.

BURNS, CALORIC

Erythema, vesiculation or loss of substance depending upon degree.

CHLOASMA

Hyperpigmentation, especially on cheeks and brow.

EPITHELIOMATA

The malignant processes are "pearly" bordered tumefactions with a tendency to central bleeding, scabbing or ulceration.

EXANTHEMATA

Papulovesicles and pustules of chickenpox and smallpox; macular erythema of measles.

FUNGOUS INFECTION, SUPERFICIAL

Circinate patches with peripheral vesiculation and central healing.

HERPES SIMPLEX

A solitary group of vesicles, commonly on lips, less commonly on cheeks and chin.

HERPES ZOSTER

Groups of vesicles arranged in areas of sensory innervation especially in divisions of the 5th cranial nerve.

HYDROA ESTIVALE

Papulovesicles with crusts and scarring on nose, cheeks, brow and chin; provocation by sunshine.

LUPUS ERYTHEMATOSUS

"Butterfly" and asymmetric erythematous, crusted and scarring plaques of inflammation.

LUPUS VULGARIS

"Apple jelly" nodules within plaques of inflammation and scarring.

NEVI

Many types: flat, raised, pigmented, hairy, cellular, vascular and combinations thereof.

PEMPHIGUS ERYTHEMATOSUS

Superficial erosion with crusting, on nose, cheeks, brow.

PYODERMA

Crusts upon superficial erosion (impetigo); sycosiform folliculitis; banal furuncles.

ROSACEA

Erythema, telangicctasia and pustules, principally on and around nose, then cheeks, chin and brow.

SEBORRHEIC DERMATITIS

Redness and greasy scaling, particularly in paranasal folds, cheeks, eyebrows.

SYPHILIS

"Split" papule at angles of mouth; annular, papular, rupial and serpiginous secondary lesions, particularly in Negroes.

VITILIGO

Patches of depigmentation in any arrangement, especially about the eyes and on lids.

XANTHELASMA

Yellow plaques on eyelids.

EARS:

PINNA, POST-AURICULAR AREA, CANAL

ALLERGIC ECZEMATOUS CONTACT DERMATITIS

Erythema, papulovesiculation, oozing and crusting on lobes and post-auricular areas from sensitivity and exposure to nickel (earrings and metal spectacle frames).

ATOPIC DERMATITIS

Erythema and fissuring at lower pole where lobe joins cheek.

CHONDRODERMATITIS NODULARIS

CHRONICA HELICIS

A painful, hyperkeratotic tumefaction on the rim, usually superior in location.

COMEDONES AND SEBACEOUS CYSTS

Blackheads and cysts in wing, lobe and post-auricular area.

OTITIS EXTERNA

Psoriasis

Heavy scaling upon erythema in wing and canal.

Pyoderma

Superficial infection like impetigo and deeper process like abscesses in meatus and canal.

Seborrheic dermatitis

Erythema, scaling, discharge and pruritus in canal and meatus.

SEBORRHEIC DERMATITIS

In addition to the canal, the wing and post-auricular area may show intense erythema, oozing and scaling.

ORAL LIPS

ANGIONEUROTIC EDEMA

Giant hives affect the lips.

CHEILITIDES

Allergic contact

Swelling and scaling occur from sensitization and evocative exposure to ingredients of lipsticks and dentrifices, wind instruments, dyes and constituents of foods and other likely allergenic materials.

Other

Avitaminosis (ariboflavinosis) and less tangible causes inflame the lips.

ERYTHEMA MULTIFORME

(Stevens-Johnson syndrome)

Swelling, vesiculation and crusting accompanies by local and systemic distress.

FORDYCE'S DISEASE

Yellowish macules representing ectopic sebaceous gland elements stud the vermilion and inner mucous surface.

HERPES SIMPLEX

A group of vesicles that itch and crust.

LEUKOPLAKIA

Whitish patches, particularly in areas of trauma from pipes and dental anomalies.

LICHEN PLANUS

Whitish, reticulated patches on vermilion or inner mucous surface.

PERLECHE

Redness and fissuring at the angles of the mouth.

PRICKLE CELL CARCINOMA

Tumefaction with hyperkeratosis, crusting or ulceration.

MOUTH

ALLERGIC CONTACT STOMATITIS

Erythema and erosions (after vesiculation) from sensitization and evocative exposure to materials or ingredients of dentures, dentifrices and other likely substances.

APHTHAE AND APHTHOSIS

Evolving vesicles, erosions and ulcers attended by severe pain.

DRUG ERUPTIONS

Particularly vesicular and bullous eruptions caused by iodides and bromides.

EXANTHEMATA

Koplik spots of measles; mucous patches of syphilis; strawberry tongue of scarlet fever.

ERYTHEMA MULTIFORME

(Stevens-Johnson syndrome)

Severe and extensive bulla formation on palate and buccal mucosa.

GEOGRAPHIC TONGUE

Changing areas of superficial inflamma-

GLOSSITIDES

Swelling and pain in the tongue occur for many vague causes.

LEUKOPLAKIA

White patches on buccal mucosa, palate, tongue or oral mucosa frequently related to a source of continuous trauma.

LICHEN PLANUS

White reticulated patches on buccal mucosa, tongue or oral mucosa.

LINGUA NIGRA

A beard-like process of filamentous hypertrophy on the dorsum of the tongue that may be tan, yellowish, green, brown or black.

MUCOUS CYSTS AND MISCELLANEOUS TUMORS

Fluid filled and cellular tumefactions.

PEMPHIGUS

Bullae, erosions and great pain.

PERIADENITIS MUCOSA NECROTICA RECURRENS

Painful ulceration in lower gingival gutters.

NECK

DERMATOSIS AND DIFFERENTIAL HINTS

ALLERGIC ECZEMATOUS CONTACT DERMATITIS

Erythema, papulovesiculation, oozing and crusting from sensitization and evocative exposure to nickel, hair dyes, lacquer, etc.

BITES AND STINGS OF INSECTS

Erythema, papules and wheals around central puncta.

CUTANEOUS TAGS AND SEBORRHEIC KERATOSES

Pedunculated, verrucous and pigmented tumefactions.

HERPES ZOSTER

Groups of vesicles in segmentary arrangements.

LICHEN CHRONICUS SIMPLEX

An exudative process in the nape of the neck or a lichenified process on lateral aspects, both attended by great itching.

PITYRIASIS ROSEA

Round or oval mascules of erythema and scaling arranged along lines of cleavage of the skin.

ANTERIOR ASPECT OF CHEST

ACNE VULGARIS

Comedones and their inflammatory consequencies: papules, pustules, cysts.

DRUG ERUPTIONS

Acneform, bullous, pityriasis rosea-like and lichenoid forms.

EXANTHEMATA

The macules of measles; the papules and pustules of chickenpox and smallpox.

FUNGOUS INFECTIONS

Circinate patches with peripheral vesiculation and central clearing (tinea circinata); macules of pigmentation or achromia (tinea versicolor).

HERPES ZOSTER

Groups of vesicles in segmentary arrangement.

KERATOSIS FOLLICULARIS

(Darier's disease)

Verrucous papules of earthy color.

MILIARIA RUBRA

Erythematous papulopustules around sweat pores.

Nevi

Pigmented macules, papules, nodules or tumors.

PEMPHIGUS

Bullae and erosions (pemphigus vulgaris); vegetation (pemphigus vegetans); erythema and scaling (pemphigus foliaceous); crusted plaques (pemphigus erythematous).

PITYRIASIS ROSEA

Erythematous, scaly, round or oval macules or plaques arranged along lines of cleavage of the skin.

PSORIASIS

Plaques of silvery scales upon erythema.

PYODERMAS

Superficial process-like impetigo or deep process-like folliculitis and abscesses.

SCABIES

Burrows and excoriations on breasts and in anterior axillary lines.

SEBORRHEIC DERMATITIS

Erythema and scaling in petaloid shapes.

ABDOMEN

DERMOGRAPHISM

Wheals along lines of friction and pressure.

DRUG ERUPTIONS

Bullous, pityriasis rosea-like and lichenoid forms.

EXANTHEMATA

The erythema of scarlet fever, macules of measles, papulovesicles and pustules of chickenpox and smallpox.

HERPES ZOSTER

Groups of vesicles in segmentary arrangement.

INTERTRIGO

Erythema and oozing in natural folds (umbilicus) and creases of fatness.

LICHEN PLANUS

Purplish or shiny papules attended by pruritus.

PARAPSORIASIS

Plaques of erythema and scaling.

PEDICULOSIS PUBIS

Nits and adult forms in abdominal hair.

PEMPHIGUS

Bullae and erosions.

PITYRIASIS ROSEA

Erythema and scaling in round or oval macules or plaques arranged along lines of cleavage of the skin.

PSORIASIS

Silvery scaling upon erythema in plaques of various sizes and shapes.

GENITALIA

APHTHOSIS

Vesiculation and painful ulceration on mucous surfaces of genitalia.

ARACHNIDISM

The bite of the black widow spider frequently occurs on the penis or scrotum.

BALANITIDES

Inflammatory processes of various causes are common on the glans penis and prepuce.

DRUG ERUPTIONS

Fixed, bullous and eczematous forms.

ERYTHROPLASIA OF QUEYRAT

A red, velvety, persistent patch on the glans.

EXUDATIVE DISCOID AND LICHENOID

CHRONIC DERMATOSIS

A crusted or scaly penile plaque.

HERPES SIMPLEX

A group of vesicles, frequently recurrent.

INTERTRIGO

Redness and oozing in folds.

KRAUROSIS VULVAE

Thickening and zerosis of mucous surfaces.

LEUKOPLAKIA

Whitish patches on mucous surfaces.

LICHENS

Chronicus simplex

Papular, lichenified patches on mons, outer lips and adjacent crural spaces.

Nitidus

Shiny papules on penile shaft.

Planu.

Violaceous papules on glans.

Sclerosus et atrophicus

Whitish patches with delling on mucous membranes.

PEDICULOSIS PUBIS

Ova, adult lice and excoriations on mons, and adjacent areas.

PRURITUS VULVAE, SCROTI, ANI

Erythema and excoriations on affected areas.

PYODERMA

Superficial processes like impetigo to deeper ones like folliculitis and hydradenitis.

SCABIES

Burrows and excoriations on penis and adjacent areas.

VENEREAL DISEASES

Chancroid

Ulcerations on penis or mucous surfaces of female genitalia with painful regional adenopathy.

Lymphogranuloma

venereum

Evanescent genital erosion with painful regional adenopathy.

Syphilis

Painless chancre and painless regional adenopathy.

VERRUCA ACUMINATA

Moist verrucous excrescences.

VITILIGO

Patches of depigmentation.

BACK

ACNE AND ACNEFORM DERMATOSES

Comedones and their inflammatory consequences: papules, pustules, cysts.

DERMATITIS HERPETIFORMIS

Pruritic papules and grouped papulovesicles, excoriated from intense pruritus.

DERMOGRAPHISM

Wheals along lines of friction and presure.

DRUG ERUPTIONS

Pityriasis rosea-like, lichenoid, bullous and other forms.

EXANTHEMATA

Papulovesicles and pustules of chickenpox.

EXUDATIVE DISCOID AND LICHENOID

CHRONIC DERMATOSIS

Pruritic plaques of edema and papulovesiculation.

FUNGOUS INFECTIONS

Circinate patches of peripheral vesiculation and central healing (tinea circinate); macules of pigmentation or achromia (tinea versicolor).

HERPES ZOSTER

Groups of vesicles in segmentary arrangement.

KERATOSIS FOLLICULARIS

(Darier's disease)

Verrucous papules of earthy color.

LICHEN PLANUS

Purplish papules on lower back.

LICHEN SCLEROSUS ET ATROPHICUS

Porcelain-like plaques on upper back.

MILIARIA RUBRA

Papulopustules around sweat pores.

Nevi

Many types: pigmented, hair, flat, raised, vascular and combinations thereof.

PARAPSORIASIS

Persistent scaly, erythematous macules and patches.

PEDICULOSIS CORPORIS

Excoriation across upper back and lateral surfaces.

PEMPHIGUS

Bullae and erosions.

PITYRIASIS ROSEA

Erythematous and scaly, round or oval plaques arranged along lines of cleavage of skin.

PSORIASIS

Heavy, silver scales upon erythematous plaques in many shapes and sizes.

PYODERMAS

Superficial or deep processes.

SEBACEOUS CYSTS

Pea- to egg-sized tumefactions containing sebaceous material.

SEBORRHEIC DERMATITIS

Petaloid patches of erythema and greasy scaling in center of back.

SYPHILIS

Roseolar, papular, rupial, nodulo-ulcerative lesions.

URTICARIA

Wheals.

ARMS, HANDS, FINGERS

ALLERGIC ECZEMATOUS CONTACT DERMATITIS

Erythema, papulovesiculation or bullae (from poison ivy resin or other eczematogenic allergens after sensitization and reexposure).

ATOPIC DERMATITIS

Pruritus, excoriations, erythema and oozing and crusting or lichenification in antecubital spaces, around wrists and on fingers.

BITES AND STINGS OF INSECTS

Papules, wheals and sometimes vesicles.

BURNS

Erythema, vesiculation or loss of substance according to degree.

EPIDERMOLYSIS BULLOSA

Bullae, erosions and crusting on fingers and elbows especially followed by scarring in dystrophic forms.

ERYTHEMA MULTIFORME

Iris lesions in macular or vesicular lesion forms on hands.

FUNGOUS INFECTIONS

Persistent scaling (Trichophyton purpureum infections); moist erythema in web between DIII and IV (moniliasis: erosio interdigitale blastomycetica).

GRANULOMA ANNULARE

Circinate lesions of peripheral nodules on hands.

HYDROA ESTIVALE

Papulovesicles with crusting on arms and dorsa of hands.

KERATOSIS PILARIS

Verrucous lesions of juvenile form on dorsa; discontinuity of hand print.

LARVA MIGRANS

Serpiginous burrows of bizarre shapes and lengths.

LICHEN CHRONICUS SIMPLEX

Lichenification and pruritus around elbows.

NUMMULAR ECZEMA

Discoid pruritic lesions consisting of vesicles and crusting.

ONYCHIAS AND PARONYCHIAS

Distortions of the nail plate and inflammation of the nail walls.

PAPULONECROTIC TUBERCULID

Crusted papules evolving into varioliform scarring on outer surfaces of arms.

POMPHOLYX

Deep vesicles in webs and palms.

PRIMARY IRRITANT DERMATITIS

Erythema, scaling and fissuring on fingers and palms.

PSORIASIS

Heavy, silver scales upon erythematous plaques on elbows and fingers.

PYODERMA

Usually superficial process.

SCABIES

Pruritic, excoriated papules on wrists and in webs.

SYPHILIS

Ham colored macules on palm.

TRAUMA

Abrasions, incised and punctured wounds.

VERRUCAE

Small, flat units (juvenile) or pea sized nodules.

VITILIGO

Variable amounts and shapes of depigmentation.

XANTHOMATOSES

Yellow nodules and plaques on fingers and palms.

LEGS, FEET, TOES

ACRODERMATITIS CHRONICA

ATROPHICANS

Erythema and edema evolving into "cigarette paper" wrinkling about knees.

ALLERGIC ECZEMATOUS

CONTACT DERMATITIS

Erythema, papulovesiculation and bullae from sensitization and exposure to materials like poison ivy resin and footgear.

ATOPIC DERMATITIS

Erythema, oozing and crusting or lichenification in popliteal spaces.

BITES AND STINGS OF INSECTS

Erythema, papules or wheals around a central punctum.

EPIDERMOLYSIS BULLOSA

Bullae and erosions on toes and knees, followed by scarring in dystrophic forms.

ERYTHEMA INDURATUM

Inflammatory nodules often ulcerating on backs of legs.

ERYTHEMA NODOSUM

Inflammatory nodules that do not ulcerate on front of legs.

Fungous infections

Maceration and scaling between toes; vesicular eruptions on soles.

HERPES ZOSTER

Groups of vesicles in segmentary arrangement.

LAVA MIGRANS

Serpiginous channels in bizarre shapes and variable lengths.

LICHEN CHRONICUS SIMFLEX

Plaques of agminated papules and lichenification about the ankles.

PSORIASIS

Heavy, silvery scales upon erythema, especially on knees.

PURPURA

Petechiae, vibices, ecchymoses.

PYODERMA

Crusted ulcers on legs (ecthyma); folliculitis and furunculoid processes.

SYPHILIS

Ham-colored macules on soles.

TRAUMA

Abrasions, incised and puncture wounds.

INTERTRIGINOUS SPACES

ACANTHOSIS NIGRICANS

Tan to black verrucous excrescences, particularly in axillae.

ALLERGIC ECZEMATOUS

CONTACT DERMATITIS

Erythema, papulovesiculation, oozing and crusting, particularly in axillae from sensitization and evocative exposure to materials in antiperspirants and clothing.

ERYTHEMA INTERTRIGO

Redness and oozing.

FOX-FORDYCE DISEASE

Papules and intense pruritus in axillae.

FUNGOUS INFECTIONS

Erythema, vesiculation, scaling, depending on type of organism.

PSORIASIS

Erythema and scaling.

PYODERMA

Abscesses in axillae particularly.

SEBORRHEIC DERMATITIS

Erythema and greasy scaling.

(To be concluded in the July issue of Medical Times)



WHAT'S YOUR VERDICT?

In this issue and every issue, Medicat Times presents authentic medico-legal cases and their interesting court decisions. Test your medical magistracy.

SEE PAGE 53a

DEAFNESS and DIZZINESS

JOHN R. LINDSAY, M.D. Chicago, Illinois

The complaints of deafness or dizziness often present a confusing diagnostic problem. On the basis of clinical findings three simple groups may be differentiated: Deafness without vertigo, deafness associated with vertigo and dizziness without deafness or tinnitus.

1. DEAFNESS WITHOUT DIZZINESS usually means an origin in the inner ear or sense organ. There are many causes including congenital hereditary and acquired types. Acquired senseorgan deafness which may present a problem in diagnosis is usually that which is rapid or sudden in onset.

Virus infections may cause sudden and profound deafness; notably mumps, measles and some upper respiratory infections. Unilateral sudden hearing loss in the adult from middle age upward is usually vascular in origin, either spasm or occlusion. Some cases occurring in early adult life do not fit into either of these groups and remain unexplained. The degree of recovery varies. A hydrops of the labyrinth, of Menière's disease, may also occur without vertigo. This is diagnosed by the tendency to low tone threshold loss for air and bone conducted sounds with fluctuation in the threshold from time to time, and tinnitus of medium or low pitch.

Certain antibiotics, notably dihydrostreptomycin, neomycin and kanamycin, have ototoxic tendencies, and in the presence of kidney damage particularly, may cause hearing loss after relatively small doses. A delayed onset of as much as several weeks has been reported in the case of dihydrostreptomycin.

An unexplained onset of progressive sensoryneural deafness must be considered as a possible early tumor. Dizziness may be absent, but vestibular function should be tested and neurological signs looked for. Additional hearing tests for recruitment of loudness and ability to discriminate monosyllabic words should be carried out as well as a search for central nervous system signs.

Unilateral deafness arising within the central nervous system is not common. Occasionally, multiple sclerosis may affect the cochlear nuclei and cause unilateral deafness.

2. DEAFNESS WITH DIZZINESS is characteristic of many diseases of the inner ear or sense organs. Well-known examples are bacterial labyrinthitis, viral labyrinthitis, fracture through the labyrinth, drugs such as salicylates and quinine, tumors invading the labyrinth, and hemorrhage into the labyrinth due to leukemia. These present no diagnostic problem. Some difficulty may be presented however, in differentiating between a Menière's disease (hydrops of the labyrinth), sudden deafness and dizziness due to viral labyrinthitis, or to vascular occlusion, and the progressing deafness with disequilibrium in early acoustic neuroma and cerebellopontine angle tumors. A rather rare cause is meningo-encephalitis, usually bilateral and of moderate degree and accompanied usually by some degree of disequilibrium.

As already mentioned, Menière's disease or labyrinthine hydrops may occur without dizzy spells but in most cases there are recurrent spells of varying severity frequency and dura-

From The University of Chicago, Department of Surgery, Section of Otolaryngology.



Anatomy of the ear showing relation of tympanic membrane A to the tympanic cavity B, the Eustachian tube C, and the labyrinth D.

tion between which there is complete absence of vertigo.

Diagnosis is made, however, on the auditory characteristics which are a threshold loss predominantly for low tones for air and bone conducted sound, wide variations in the deafness from day to day or week to week, sensitivity to loud sharp sounds, impairment of ability to understand speech although loud enough to be heard, and the presence of recruitment. Caloric tests for vestibular function may show some impairment but rarely is there a severe loss.

Early acoustic neuroma shows no fluctuation in the hearing threshold, recruitment is absent or incomplete, but the ability to discriminate words may be good or it may be greatly impaired.

Caloric tests usually show a marked loss or absence of response in the affected ear even when hearing is not greatly impaired. X-rays of the internal auditory meati are necessary, but normal meati do not exclude a medially located tumor.

Dizzy spells are not common in acoustic neuroma, but some ataxia usually can be demonstrated early. As the tumor enlarges, 5th nerve signs appear, usually as a loss of the corneal reflex and paresthesias, a spontaneous nystagmus beating in the direction of gaze may appear and 7th nerve impairment.

The sudden onset of deafness with dizziness in a previously healthy ear is also frequently confused with Menière's disease.

This syndrome may occur from invasion of

the labyrinth by some viruses either by way of the middle ear or by the bloodstream, as has apparently occurred in some cases of measles. The dizziness may recover slowly, persisting for weeks as a postural symptom.

Pathological evidence as to the exact lesion has not yet been obtained in these cases.

3. DIZZINESS WITHOUT DEAFNESS presents a more confusing problem because of difficulty in determining whether the origin was in the inner ear, the 8th nerve or the central nervous system.

The absence of auditory symptoms usually prevents any definite localization to the inner ear while in many cases there may be no sure indication that the origin is in the central vestibular system.

Many variations in the clinical picture are found. A single brief attack of vertigo with complete recovery suggests an inner ear origin. More than one attack may occur and must be suspected as an early Menière's disease.

Other more or less common types may be recognized. A sudden onset of severe vertigo which subsides steadily and becomes a postural vertigo lasting varying periods from a few weeks to even two or three years is perhaps most frequent.

The disequilibrium, consisting mainly of uncertainty in walking, turning, stooping, etc., may be most troublesome. Patients quickly learn to avoid those postures which bring on severe vertigo.

This type is common in middle and late adult life and can be attributed to a vascular lesion. The location is probably outside the sense organ, either in central vestibular nuclei or as has been proven in one recent case a vascular lesion at the ganglion of Scarpa.

A quite common type of vertigo occurs in some older people or those with deficient circulatory response upon rising from a supine or stooping position to the upright. If only of brief duration it can usually be avoided by changing position slowly. Also, in older age groups it is common to have vertigo on changing position which lasts as long as several minutes without any other evidence of localized

central nervous system disease. This also is considered to be circulatory deficiency.

Certain infections may cause vertigo either as a constant symptom or a postural symptom. Bacterial infections, as well as some virus infections, have apparently been the origin. The latter has sometimes occurred in a semi-epidemic form.

Vascular lesions involving the posterior inferior cerebellar artery or other vessels in the region may cause severe vertigo along with other central nervous system signs.

Vertigo may also occur in cases with low blood pressure or vasomotor insufficiency and is usually postural. The climacteric is not infrequently associated with recurring vertigo, usually of a postural nature. Perhaps the chief problem in the presence of vertigo either as an attack or as postural vertigo is to exclude a progressive disease.

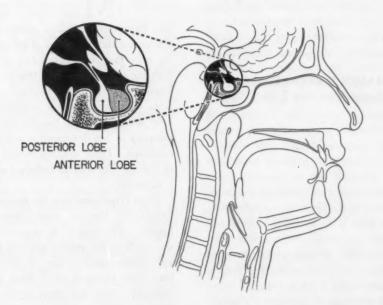
Multiple sclerosis and tumor in the posterior fossa may sometimes produce vertigo as one of the earliest complaints. A careful neurological examination is therefore always necessary in all cases. One of the chief concerns of the patient who experiences a severe spell of dizziness is that it may be followed by a "stroke."

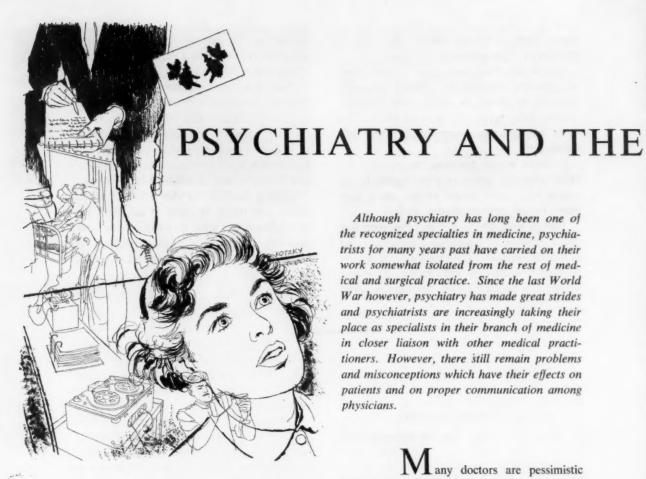
While a cerebral vascular lesion of greater extent may follow in cases of advanced vascular disease, the great majority recover spontaneously. Reassurance is, therefore, well justified and is an important part of the treatment.

950 East 59 Street

CLINI-CLIPPING

THE HYPOPHYSIS





BENJAMIN J. BECKER, M.D. Forest Hills, New York

Although psychiatry has long been one of the recognized specialties in medicine, psychiatrists for many years past have carried on their work somewhat isolated from the rest of medical and surgical practice. Since the last World War however, psychiatry has made great strides and psychiatrists are increasingly taking their place as specialists in their branch of medicine in closer liaison with other medical practitioners. However, there still remain problems and misconceptions which have their effects on patients and on proper communication among physicians.

any doctors are pessimistic and therapeutic nihilists regarding emotional and personality problems of patients. Some refer only disturbed psychotics to psychiatrists with the erroneous notion that psychiatric help consists only of shock therapy or hospitalization. In many instances, practitioners wait too long until a patient has become desperately unhappy or has developed a serious emergency condition. These doctors would never dream of temporizing with an inflamed appendix until it ruptured.

Some physicians have the misconception that psychiatric therapy must always be very lengthy. The length of treatment varies with the needs of the patient and the goals of therapy. Some patients may be seen briefly until they have received relief from some current difficulty. They are often people who do not want or have great resistance to long-term

MEDICAL PRACTITIONER

therapy. To achieve deeper goals, involving character change, personality growth, and a more mature approach to living, psychoanalytic therapy is necessary, and this is usually lengthy. Therapy is not the same for all patients, and the psychiatrist must use his judgment regarding technics to use, length, and depth of treatment. In some cases, a lengthy, protracted therapy may be the only way to help a patient maintain a reasonably normal life outside of a mental institution.

While there are some physicians who do not avail themselves of psychiatric help for their patients, many others are interested in and are well informed regarding emotional problems of people. These doctors work closely with psychiatrists in trying to help their patients with their emotional difficulties whether these be psychosomatic or interpersonal in nature. An important problem which is present both within and outside the specialty of psychiatry is the vague conception of what psychiatric therapy—principally psychotherapy—really consists of.

There is much confusion regarding the nature of psychotherapy—its goals, technics, and uses. One reason for this has been the isolation and exclusiveness of the various schools of psychoanalysis and psychotherapy. This is not strange if one considers such diversity as typical phenomena in the historical evolution of a complex branch of knowledge. The beginnings of modern psychotherapy are relatively recent, as we shall soon see.

What is psychotherapy? It is a treatment conducted by a specially trained clinician whereby through verbal and non-verbal communication and through factors in the relationship between patient and doctor, the goals of relief from suffering and personality growth are sought. These goals are most readily attained through use of psychoanalytic technics. Definitions of psychoanalysis vary somewhat with the different psychoanalytic schools. In general, psychoanalysis is a form of psychotherapy which seeks a rather important change in the character structure of the patient, leading to growth as a person and a healthier orientation toward life. These goals are brought about through ventilation, emotional catharsis, dream interpretations, the development of insight, the relationship with the analyst, and many other factors in the process.

In recent years there has been a constructive trend toward greater tolerance and less rigidity of viewpoint among the different schools of psychotherapeutic thought. Most psychiatrists admit that there must be room for fresh and diverse thinking in order to insure progress in the field. Thoughtful and conscientious psychiatric practitioners are availing themselves of valuable ideas that have come from different schools of thinking to broaden and sharpen their approach to the complex mental and emotional problems they must deal with.

Another problem which is gradually being corrected is the lack of a total approach by some psychiatrists. Some are too exclusively oriented toward organic therapies, like shock or psychopharmacology. Others are too exclusively directed toward psychotherapy. Some organically oriented psychiatrists discourage or minimize psychotherapy. I know of one psy-

Too often, doctors are afraid to mention the psychosomatic implications of their patients' complaints to them, or to explain the importance of personality and emotional troubles in the genesis of their afflictions. There is much reluctance in advising a patient to see a psychiatrist for fear that the patient may be offended. Such hesitations are usually groundless, for patients are often only too willing to listen to sound advice and explanations from their family doctor.

chiatrist who gave one or two yearly series of electric shock treatments to a patient for many years. The patient suffered from recurrent depressions, but the doctor would not suggest intensive psychotherapy, which would have gone into her relations with her parents, her childhood, her neurotic character development, and her present adjustment in marriage, which was exacting a heavy toll from her. On the other hand, there are some psychoanalysts who refuse to avail themselves of drug therapies and so limit the flexibility of their therapeutic resources.

Unfortunately, many psychiatrists have lacked adequate training in psychotherapy. The ideal background for practicing psychotherapy is probably psychoanalytic training, which would include a personal analysis, supervision, and a curriculum of courses on psychiatric and psychoanalytic subjects. However, this is not the only type of training. There are some training centers, like Hillside Hospital in New York, that offer supervision, lectures, and clinical conferences to residents and young psychiatrists. Some psychiatrists undergo personal psychoanalysis without enrolling in a psychoanalytic institute. Proficiency in psychotherapy is dependent not only on the acquisition of knowledge and technics. The factors of personal growth and maturity are of the utmost importance. These are attained through the gradual process of seasoning by experience.

In recent years, more general hospitals have been devoting some of their bed space to psychiatric patients. This is an important and praiseworthy development. There are patients who need one, two, or three weeks of hospitalization and such needs are best met by a general hospital. The hospitals must trust the judgment of their psychiatrists regarding selection of patients for admission. Hospital administrators, personnel, and some physicians still think too often of all psychiatric patients in terms of closed wards and special restraints. A better understanding of personality and psychosomatic disorders is needed.

In order to eliminate this misjudgment, there should be closer liaison between the Department of Psychiatry, which should not be a part of the Department of Medicine, and the other staff services. Physicians do not avail themselves often enough of psychiatric consultations in the hospital, even where they are to be had just for the asking. A modern psychiatric unit in a general hospital, should be able to offer deep narcosis, sub-shock insulin therapy, electric shock therapy, the appropriate drug therapies, and psychotherapy. To serve the community effectively, general hospitals must have well-organized psychiatric outpatient clinics for the lower income groups. These would provide individual and group psychotherapy, as well as drug therapies.

How can we acquire a better understanding of the field of psychiatry, both what it has developed from and what it is today? Often we tend to take the present too much for granted and ignore the past we have evolved from. Psychiatric progress has lagged behind the rest of medicine. The word psychiatry itself is relatively modern, having been in use little more than a hundred years. In England the terms psychological medicine and medical psychology are still frequently used. Medicine in general, but psychiatry in particular, has moved up from the past along paths filled with ignorance, misconceptions, and errors. In surgery, anesthesia was introduced only a little over a hundred years ago. Antisepsis and asepsis as techniques were discovered even more recently. It is not too long since blood-letting ceased to be a favorite therapy in general medicine. Barely a generation ago, the average physician prescribed catch-all remedies for most diseases. There was a lack of specific therapies until the dawn of chemotherapy with Ehrlich at the beginning of this century. It is difficult to realize that less than a hundred years ago, the bacterial origin of infections was unknown.

Psychiatry has undergone a more tortured history. People have always experienced great difficulty in understanding or tolerating mental and emotional afflictions. For hundreds of years, the mentally troubled were considered possessed by demons. They were scourged, tortured, clapped in irons, and thrown into dark dungeons. It was in 1793 that Pinel, the great French psychiatrist, began to liberate mental patients from the chains and dungeons some of them had been in for over thirty years. Then came the era of asylums, custodial care, nosological classification, and therapeutic pessimism from which we are just emerging. Modern psychiatric therapy began with the use of hypnosis by the French psychiatrists, Liébault, Bernheim, and Charcot during the latter part of the nineteenth century. It was in Charcot's clinic at the Salpetrière in Paris that Freud first became interested in the treatment of conversion hysteria by hypnosis. Conversion hysteria is an unconscious process whereby the individual copes with a deep emotional conflict by repression and then displacement, producing an abnormal sensory or motor functioning in the body. This may include blindness, deafness, paralysis of an arm or leg, or lack of sensation anywhere in the body.

The story of the beginnings of psychoanalysis has been told many times and is well known. Freud went back to Vienna and together with Breuer, an older physician, used hypnosis to treat hysteria. Freud discarded hypnosis as unsatisfactory. Using technics of free association and dream interpretation, he began to develop a new system of concepts and therapy, which he called psychoanalysis. Freud's discovery that much of our thinking, feeling, and doing is unconsciously motivated was revolutionary at that time and was not readily accepted. His work on the understanding and use of dreams in therapy has proved enduringly valuable to the present. The study of dreams has thrown much light on the workings of unconscious mental processes. Freud stressed the importance of the relationship between doctor and patient in therapy. The most important factor in the cure is what goes on in verbal and nonverbal communications between doctor and patient. Although Freud's accomplishments must be considered monumental and trailblazing, it would be inaccurate to equate modern psychoanalysis with the concepts Freud evolved during his lifetime. It is now twenty years since Freud passed away, and much has transpired in that period.

More psychiatrists are finding that a holistic or total approach to mental and emotional problems is most helpful. This is not particularly new, for years ago Adolf Meyer advocated a total understanding of the patient from different observation points, and then a synthesis of this knowledge. Likewise those who attempt holistic thinking must integrate various concepts into a unified, living picture and not simply juggle an agglomeration of diverse hypothetical formulations. One of the modern concepts in psychiatry is the importance of both interpersonal and intrapsychic factors in the personality growth of the individual. The interpersonal factors include relations with other people, and this begins from the moment of birth. The relationship with the mother is the first important interpersonal contact. The mother's personality, including her constructive assets as well as her deep conflicts are felt by

the growing infant and child through perceptual communication. This is a deep learning process which is different from the more intellectual conceptual learning that begins to take place as the child grows older. The father, the siblings, and other factors in the child's environment exert similar shaping influence upon him. These facts have prophylactic implications. Since emotional problems are perpetuated from generation to generation, the more each generation can be helped to greater emotional health, the more constructive will be the effect on the succeeding generation.

Growing up is normal, and yet it is a difficult process because it involves pioneering moves from the known to the not yet known all the way. From the time the infant utters his first cry he embarks upon a path of moving from one stage of learning to another in a continuous process. He learns more in the first eighteen months of life than he ever will again in any succeeding period. The infant must progress from liquids, to solids, to various new foods. He sits up, then stands up, then must cling for support as he takes a few steps. One day he takes his first few steps without support and he has learned to walk. The approach to toilet training is highly important. At one extreme are parents who are too rigid in exerting pressure on the child to develop approved toilet habits. At the other extreme are parents who adopt a laissez faire attitude and just wait for the child to train himself. These two types of parental influence may be repeated all through childhood on many occasions and in many areas.

At the age of two or three, the child begins to move out from the protected and exclusive atmosphere of his home and increasingly experiences contacts with other children. The world of interpersonal relations broadens, and the learning how to give and take with one's peers begins. At about six or earlier, the young child goes to school and begins to discover work, self-discipline, and the authority of an adult outside of his home. Normally, a child should be capable of passing through these stages of growing up and should develop

into a healthy, emotionally well-equipped young adult. The interplay between certain constitutional predispositions and the unfavorable influences of personalities in the child's immediate environment may provoke a basic insecurity in him which is the beginning of the development of a neurotic character structure. Unconsciously and intuitively the child develops certain personality traits to relieve his insecurity and to help him maintain himself in life. He may become predominantly compliant, aggressive, or detached. More or less severe intra-psychic conflicts may ensue which would oblige the child to develop even more complex personality defenses, including many psychosomatic reactions.

The holistic approach to the understanding of emotional problems in people would stress both the past and the present factors in the life history of the patient. The psychiatrist must help his patient explore both of these. The patient is the product of what he has experienced throughout his life, and he has been shaped by the past he has lived through. However there are dynamic forces in his present personality structure which have to do with his motivations, his needs, his values, and his inner conflicts. The more awareness a patient can develop, the more he can be helped. Not only must a patient make peace with his past and all its traumatic influences, but he must arrive at constructive solutions for his present inner conflicts and tensions. These solutions should be favorable to his growth as a person.

In holistic and intensive psychotherapy, we must stress both the conscious and the unconscious factors in the patient's life. We have already mentioned the role and importance of unconscious motivations in understanding people's behavior and emotional reactions. The conscious influences within people must also be kept in mind, for they are a valuable dimension. The job situation with its work or interpersonal problems, the marital situation, the social pressures are all sources of tension and unhappiness which the patient is aware of but feels helpless to cope with. Of course there is an unconscious dimension which complicates

each conscious problem. People are usually not aware of deep factors within their personality which influence their relationships with others or their performances in general.

Although the development of psychopharmacology has proved an invaluable aid in psychiatric therapy, it must not be considered a panacea. The future will undoubtedly give us even better chemotherapeutic tools. Psychochemistry has been teaching us something of the biochemical mechanisms which are the immediate causes of some mental and emotional symptoms. We may rest assured that in time to come much more will be learned of the chemistry of human thoughts and feelings. This is in line with the concept of mind and body unity, which holds that mind and body are not to be viewed as separate entities. However, human personality with all of its complexities cannot be understood purely in terms of chemistry. Man passes through life in a continuous process of growing as a person. A thorough understanding of some of the concepts of human growth is essential for prophylactic and therapeutic psychiatry.

For Freud, growth was principally a process of psychosexual development. He described the erogenous zones of the infant, the oedipus period between the ages of four and six, the latency period until puberty, and finally the genital stage. Character traits began to develop early in life and the type of personality was determined by which erogenous zones predominated during infancy. Psychosexual development could become arrested at any level, or regression to a previous level of development could occur.

Karen Horney described the process of human growth from a different dimension. In growing up, the child develops unhealthy personality traits as defensive solutions to inner conflicts. In a process of alienation from the real self, the child, adolescent, and later the adult move away from developing a healthy personality and instead become people plagued by neurotic conflicts. The real self is one's true potential as a person. The child who has conflicts forms an unconscious glorified and

idealized image of himself. Unwittingly his life becomes dedicated to reaching this image through mastery or through goodness. On the other hand he may resign from the struggle by self-restriction or by rebellion. These basically unhealthy personality devices seem at times superficially successful, but they take their toll and interfere with the development of a person's spontaneity and healthy resources.

Many European and some American psychiatrists have become increasingly influenced by existential concepts. The individual from childhood through adulthood is understood in terms of what "being in the world" means to him. Each person is influenced by his intrapsychic world, by the world of relations with other people, and by the world of the total natural environment. People who have grown in an unhealthy direction are living in unauthentic existence. The purpose of therapy is to help the patient lead a more authentic life. We see that this concept is not very different, in many ways, from that of alienation from the real self.

Cannon's concept of homeostasis was an important advance in the understanding of human physiology. In brief, the body tends to maintain a constancy of relations or equilibrium in its processes. Any departure from this equilibrium sets in motion activities that tend to restore it. This concept is certainly valid on one level. However, the final goal of the human organism cannot be merely the maintenance of a static equilibrium. Growth implies a deliberate interruption of a previous stage of mental and physical adjustment in order to arrive at a higher level of development. Health is a process of continuous growing in the direction of greater fulfillment of one's total potential resources.

Concepts of health and disease are changing. There is still much to be learned. Disease is not merely a question of bacterial invasion, even in infection. The soil of the body plays an important role. It may be conditioned for illness by stress and by unhealthy mental or emotional approaches to living. We have learned from psychochemistry that norepine-

phrine, serotonin, and other chemicals exercise an important influence over our mental processes. The various stress hormones, such as ACTH, desoxycorticosterone, and cortisone exert powerful effects upon the well-being of the organism. As new discoveries are made, these chemical influences will be much more fully understood by psychiatry, as well as by the rest of medicine. The result will undoubtedly be a sharpening and expansion of our therapeutic resources.

And yet, we must consider the human organism as more than an agglomeration of molecules, biological cells, tissues, and organs united by processes of physiological chemistry. Here is an example of the whole being much greater than and different from the sum of its parts. Chemical therapy alone will not solve

human problems. One of the most valuable reasons for the importance of psychotherapy is the human contacts and the relationships which are so urgently needed by the patient. The psychiatrist must be a student of human nature in all of its complex and multiple ramifications. This is a large order, to be approached in all humility. It would require a good knowledge of human history, including the history of medicine in general and its specialty of psychiatry. Without being a profound student of philosophy, some knowledge of philosophic concepts is useful, as is some background in anthropology and sociology. Finally, it is helpful to have experienced life fully, to be keenly interested in the panorama of our time, and to be truly concerned with one's growth as a person.

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DEPRESSION

THERAPY

WITH IMIPRAMINE

HYDROCHLORIDE

ADAM J. KRAKOWSKI, M.D. Plattsburgh, New York

Depressive states of various types are said to have shown a marked increase in incidence in the postwar years both in office practice and in the rate of hospital admissions.¹

For the medical practitioner outside of psychiatry, the fact that depression may first present itself in the form of physical symptoms is of great importance.² Most depressive reactions are self-limited in duration and many are not recognized or are misdiagnosed; consequently statistics are not complete or reliable.

Depression is an emotional and ideational state characterized by a specific quality of emotional tone in the form of a dejected, anxious or apthetic mood with inhibition of thinking, instinctual drives and will. For practical purposes while dealing with the depressed patient, it is important to classify the patient not only as to the etiology of his illness and the dynamic factors involved, but also as to the severity of his illness. The neurotic and

the reactive depressions are usually milder, yet they may be occasionally dangerous, limiting the social adaptability and capacity for work. Manic-depressive reactions have a cyclic quality and the patients during remissions, though socially adaptable, are not "healthy." These psychotic reactions alternate during the attacks through phases of elation and excitement and phases of depression, though some patients represent mostly the depressed phases. The agitated depressive reaction, a specific clinical entity, whose occurrence is quite frequent, is characteristic of the involutional age with its physiological and emotional stresses. Old age with its brain disease is frequently accompanied by depression and certain forms of schizophrenia manifest the presence of depressive phenomena. Finally one has to keep in mind that intracranial tumors are frequently manifested by the presence of depressive reactions.

As the medical practitioner sees the patient particularly at the onset of a depressive reaction, he is confronted with a multitude of somatic symptoms which may be misleading at times, even in the presence of a severe psychotic reaction. Very few patients, especially at the onset of depression, offer direct complaints of being depressed. Among the most frequently given complaints we find insomnia,

Dr. Krakowski is Attending Psychiatrist, Champlain Valley Hospital, Attending Neuro-Psychiatrist, Physicians Hospital, Consultant Psychiatrist, Plattsburgh Air Force Base Hospital, Director Plattsburgh Child Guidance Clinic, Plattsburgh, New York and Consultant Psychiatrist, Will Rogers Memorial Hospital, Saranac Lake, New York,

interrupted sleep or very early awakening; other symptoms include fatigueability, weakness, dizziness, faintness, headaches, indigestion, loss of appetite, constipation, disturbances of menstruation and amenorrhea, loss of libido and potency.

The psychic complaints have to be elicited through interrogation and consist of impairment of interest and concentration, indecisiveness, worry, moodiness, loss of self-esteem and self-confidence, hopelessness and helplessness, worthlessness, feeling of being rejected, feeling of guilt, fear of mental illness and finally, feeling that life is not worth living or frank suicidal ideas or tendencies. Rationalizations are frequent and misleading to the physician, particularly when the findings on examination reveal the presence of a chronic minor illness of a psychophysiological type, mild hypertension or when the patient is found to be hypotensive or mildly anemic. On examination the depressed patient displays the presence of a characteristic, sad, apprehensive facies; his speech is retarded, his actions are slow, his thought processes slowed down. He may show no weight loss though his hydration is frequently poor; his pulse rate tends to be low and the motility of his G.I. tract impaired.

In diagnosis the physical examination is, as usual, of great importance. In addition to clinical evaluation certain physiological tests may be utilized in diagnosis, such as the adrenalin-methacholine (Mecholyl®) chloride test or sedation threshold test.5 The management of the patient depends basically on the decision whether the patient can be cared for by the family physician or should be referred to a psychiatrist and whether he may remain an ambulatory patient or should he be admitted to the general or mental hospital. The criteria on which such a decision is based consist of severity, duration, type, previous history of suicidal tendencies and above all the present risk of suicide.4 It must be borne in mind that with the advent of agents for chemotherapy of depression and the availability of these drugs to all medical practitioners, the alleviation of severely depressed states is more fre-

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quent. The greatest suicidal risk exists not in the very severely depressed, but in those patients who have already partially recovered from a severe depressive bout.

Outside of specialized forms of psychiatric management including the evaluation of the patient's personality, genetic and hereditary factors, the psychodynamics of the depressive illness, the psychotherapeutic efforts and the environmental manipulations, the treatment of the depressive reactions consists of various somatic therapies like electro-convulsive therapy, electro-narcosis, electro-coma, insulin coma, Metrazol® convulsive therapy, continuous sleep treatment and, in certain most severe cases, psychosurgical procedures.

Until a few years ago, drug therapy consisted of sedatives and stimulants but in recent years has become a subject of extensive research and so far has brought a partial answer to the problem of attempts to eliminate somatic forms of therapy. The convulsive therapies are very effective in interrupting and shortening of depressive episodes and the decrease of the suicide rate. The hospital readmission rates within one year from discharge are claimed by some to be reduced approximately fifty percent² but one has to understand that the underlying disease is not cured. Others estimate the complete and/or social recovery rate for depressed patients treated with electroshock therapy to be about sixty-eight percent within the first year as contrasted to the fortyfour percent spontaneous recovery rate occurring within the first year of illness.6 Although the efficiency of this treatment is recognized, one encounters contraindications such as coronary infarction, glaucoma, severe bone diseases and side effects like anxiety, confusional states and amnesia. In neurotic depressions and in senile patients such treatment may therefore be impossible.

So far the drug therapy of depression has not been satisfactory either because the drugs used have not been sufficiently and uniformly effective, or because their use has to be restricted by dangers of extremely severe side reactions or complications.

Opium and its derivatives, for instance, have shown good effects on certain depressions but their drawbacks are well known.7 Amphetamines which were of little effect and tended to produce addiction are practically eliminated⁶ and the same is true of steroid hormones. Phenothiazines and reserpine are occasionally useful but in most instances these drugs intensify depressed states or even produce them.9 The action of phenothiazines is the alleviation of states of hyperexcitation through inhibition of epinephrine precipitable anxiety10 and this is possibly achieved by the inhibitory effect on the posterior hypothalamus¹¹ and therefore has no effect on the mechanisms involved in the production of depression.12

Until quite recently Iproniazid (Marsilid® Phosphate, Hoffmann-LaRoche) has been the most effective known drug for certain forms of depression¹³ but its use has been restricted by occasional severe complications. Iproniazid inhibits the monoamine oxidase, the enzyme which destroys catecholamines (epinephrine, nor-epinephrine and allied substances) and in this way is said to exert its energizing effect.

The newest of the anti-depressive agents is an iminodibenzyl derivative, Tofranil® (imipramine hydrochloride),* chemically known as 5-(3-dimethylaminopropyl)-10, 11-dihydro-5H dibenz (b,f)azepine hydrochloride. It was introduced by Kuhn, in Switzerland, who described it as possessing an antidepressive effect particularly in the endogenous type of depres-

sion. Tofranil is a drug resembling very closely the structural formula of Promazine HCl and differs from it only in the nature of the bridge binding the two benzene rings, in that it is formed of an ethylene group instead of a sulfur atom (Figure I). Tofranil has a much less tranquilizing effect than Promazine but in contrast to phenothiazine, it exerts a stimulating action on depressed patients.¹⁴ The exact mode of action is not known but the drug is said to block reticular formation.¹⁵

The following are the results of our own experiences with Tofranil.

Study

This study was conducted on seventy consecutive ambulatory and/or hospital cases of whom fifty-two were women and eighteen men. The selection was based on the existence of a depressive syndrome as the main feature in the majority of cases but in several cases the depression was either coexistent with other major symptomatology or developed in the course of therapy. The latter was true in several cases of neurotic depression treated by psychotherapy and in one case of schizoaffective schizophrenia. Of the total number of patients treated, forty-two belonged to the group of endogenous depression and the remaining were the neurotic, the reactive, comprising of a group of twenty patients, and finally there was a group of seven patients of whom most were depressions in senile individuals, one who had severe Parkinson's Disease, and two in patients who were treated for a prolonged period of time with reserpine preparations and in whom withdrawal of reserpine did not result in recovery from depression.

^{*}The generous amounts of imipramine hydrochloride [Tofrānil*] used in this study were supplied by courtesy of Geigy Pharmaceuticals, Division of Geigy Chemical Corp., Ardsley, New York.

The ages varied from nineteen to seventynine years, with the average age of 43.3 years. Of the group of endogenous depressions, nine patients had a history of one previous attack, six . . . two attacks, eight . . . three attacks, and two . . . four attacks of depression. Eight patients showed a history of one suicidal attempt, one of two attempts and one of four. Two of these patients had one admission and two had two previous admissions to state hospitals. Nine patients of this group were previously treated with electroconvulsive therapy, one during one episode, four had two different courses of electroconvulsive therapy, two . . . three courses and two . . . four courses in the past. All ambulatory patients were seen once weekly for a month, every two weeks for another month of treatment and at least monthly thereafter. Laboratory work was performed in most cases on each occasion of the office call or if any complication was suspected. The routine laboratory work included blood counts, alkaline phosphatase, icterus index, urinalysis and on occasion the bromsulphalein test.

No double-blind study was undertaken but on occasion we had a chance to observe patients who discontinued the medication when the side reactions became too severe. In most patients in whom improvement was effected, the discontinuance of medication produced relapse of symptoms within two to five days.

The initial dosage was usually seventy-five to one hundred mgms. a day in divided doses, the oral route was used exclusively since most of our patients were ambulatory. The maximum daily dose used was 250 mgms., with the average of 150 mgms. for the maximum dosage and 100 mgms. for maintenance treatment. The minor side effects were mostly proportionate to the dosage used. In a great majority of cases, other drugs or methods of treatment were applied simultaneously.

Of the fifty-nine patients who were not forced to discontinue treatment either due to failure or severe side reactions, fifteen patients have terminated the treatment improved and their condition remains satisfactory. The remaining ones are on maintenance doses which

TABLE I OVERALL RESPONSE TO TOFRANIL®

REMISSION	NO.	%
COMPLETE	38	54.4
MARKED	17	24.3
SLIGHT	4	5.6
None	11	15.7
TOTAL	70	100.0

vary from 25 mgms. a day to 150 mgms. a day with an average of 75 mgms. a day. Several of these patients were tried without the drug or on smaller doses and this attempt resulted in return of their depressive symptoms.

Tables I and II show overall response and the response by type of depression. One notices that among the group of endogenous depressions, there is a group of patients which was classified as "Endogenous periodic." This group consisted of patients who have shown previous depressive attacks without characteristics of manic-depressive psychosis and who were not typically involutional either in clinical picture or by age.

Of the eleven patients who obtained no remission of their symptoms, eight became worse of severe agitation; this could be controlled after withdrawal of Tofranil with neuroleptic drugs. Physical complications which forced discontinuance of Tofranil made the patients worse also temporarily. The group of slight improvement was below six percent of the total number of cases treated and for practical purposes this type of improvement was counted as a "failure" of treatment. This combined group comprises slightly over twenty-one percent of the patients treated, leaving over seventy-eight percent of the patients, in whom there was either complete remission of symptoms in over fifty-four percent or marked remission in another twenty-four percent.

Within the depressed manic-depressives all showed excellent remission of symptoms. In the "endogenous periodic" group which comprised over thirty-five percent of our series eighty percent showed complete or marked remission of symptoms with predominance of

TABLE II RESPONSE BY THE TYPE OF DEPRESSION

						PEN.	PMICEIAN			
TYPE	TOTAL	PATIENTS	100	COMPLETE	M	MARKED		SLIGHT	2	NONE
MANIC DEPRESSIVE	4	4 5.7%	4	8.7%	1	1	1	1	1	
ENDOGENOUS PERIODIC	25	35.7	12	17.2	00	11.4%	1	1.4%	4	5.7%
INVOLUTIONAL	13	18.6	1	10.0	3	4.3			60	4.3
ORGANIC-SENILE	7	10.0	80	7.2	1	1.4	1	1.4	1	
NEUROTIC	16	22.9	00	11.4	S	7.2	1	1.4	7	2.9
REACTIVE	4	5.7	2	2.9	1	-	1	1.4	1	1.4
SCHIZO-AFFECTIVE	. 1	1.4	-				1		1	1.4
TOTAL	70	100.0%	38	54.4%	17	24.3%	4	2.6%	11	15.7%

TABLE III RESPONSE BY THE SEVERITY

SEVERITY TOTAL PATIENTS COMPLETE MARKED SLIGHT NON MILD 28 40.0% 16 22.9% 8 11.4% 2 2.8% 2 SEVERE 42 60.0 22 31.5 9 12.9 2 2.8 9 FOTAL 70 100.0% 38 54.4% 17 24.3% 4 5.6% 11							REM	- NOISSI			
28 40.0% 16 22.9% 8 11.4% 2 42 60.0 22 31.5 9 12.9 2 70 100.0% 38 54.4% 17 24.3% 4	SEVERITY	TOTA	AL PATIENTS	0	OMPLETE	2	KARKED		SLIGHT		NONE
8 42 60.0 22 31.5 9 12.9 2 70 100.0% 38 54.4% 17 24.3% 4	Мігр	28	40.0%	16	22.9%	00	11.4%	61	2.8%	2	2.8%
70 100.0% 38 54.4% 17 24.3% 4	SEVERE	42	0.09	22	31.5	6	12.9	63	2.8	6	12.9
	TOTAL	70	100.0%	30	54.4%		24.3%	4	2.6%	11	15.7%

TABLE IV RESPONSE RELATED TO AGITATION AS AN INITIAL SYMPTOM

						REMISSION	-			
AGITATION	TOTA	L PATIENTS	5	OMPLETE	2	IARKED	S	LIGHT		HONE
PRESENT	20	28.6%	10	14.4%	60	4.3%	2	2.8%	80	7.2%
ABSENT	20	71.4	28	40.0	14	14 20.0	64	2.8	9	8.8
TOTAL	70	100.0%	38	54.4%	17	24.3%	4	5.6%	111	15.7%

complete remission. The involutional depressive group of thirteen patients showed remission and marked improvement in ten patients—with somewhat similar results in the neurotic group but only fifty percent of improvement in the reactive depression. The small sample in this group, however, does not permit one to draw sufficient conclusions.

In one case of depression which developed during psychotherapy of a schizoaffective schizophrenic, Tofranil activated severe anxiety and delusional thinking.

The overall impression gained was that the best results were obtained in the group of endogenous depression, i.e., markedly higher rate of remission than the spontaneous remission rate.

Table III shows response to Tofranil by severity of symptoms. In our series we have seen a higher rate of complete remissions within the "severe" group than within the mild group. "Marked" remissions were at an almost equal rate in both groups.

Table IV shows the presence of agitation as an initial symptom and the response to Tofrānil. Of the group who showed agitation comprising over twenty-eight percent of the total number of cases, sixty-five percent showed complete or marked remission as contrasted to a higher degree of complete or marked remission among those without initial agitation. This observation varied somewhat from that made in the clinical studies reported by the manufacturers of Tofrānil.

In contrast to various previous studies on Tofrānil, reporting the use of neuroleptic drugs and sedatives in only small numbers of patients, we found that the use of tranquilizing drugs, sedatives and other forms of treatment became necessary in the majority of cases studied. Electroconvulsive therapy had to be used in ten percent of cases because of the existence of severe suicidal tendencies. The number of electroconvulsive therapy when treatment was combined with Tofrānil ranged from two to eight convulsions which represents a marked decrease in the treatments used for depressions in general. Various tranquilizers were used in

eighty-five percent of cases and the dosage was in most cases very small. These drugs helped to combat anxiety in neurotic depressions and agitation which was present as an initial symptom or as a side effect. Sedatives were used in three cases for sleeplessness. In one case concurrent use of Dextroamphetamine sulfate had to be continued, not because of its stimulating property, but because its long use necessitated slow withdrawal. Finally, psychotherapy was used in ten cases of neurotic depression, but this has not added to the recovery rate which was sixty percent of this group.

Table V shows response by sex and age distribution. Three-fourths of the patients were females. The males represented a somewhat higher rate of the failures. There was not a significant rate of variations of complete and marked remissions in the different age groups.

Table VI shows response by length of therapy. Here it is evident that the complete and marked remission was proportionate to the duration of therapy. In the group of thirteen patients treated for one month or less, only three showed complete remission. The remaining nine showed no remission and the discontinuance of therapy occurred either due to severe side reactions or the failure in improvement after three weeks. It may also be noted that severe side effects which necessitated the discontinuance of treatment occurred in most patients shortly after the initiation of treatment. A comparatively small number of patients have been considered "cured" and outside of those who had to terminate the treatment because of serious side effects, the majority still continue on maintenance treatment. We consider it to be too early to make a definite statement pertaining to the relationship of duration of treatment with Tofranil and the "recovery" rate.

The side reactions encountered during our study were divided into two groups. The first group consists of the cases in which the sevverity of side reactions necessitated termination of treatment, and the second which consisted of untoward effects which were either tolerated or controlled through adjustment of the dosage

TABLE V RESPONSE BY SEX AND AGE

						HEM	IEMISSION			
SEX	TOTA	A PATIENTS	99	MPLETE	M	ARKED	SLI	SLIGHT	2	ONE
MALE	18	25.7%	90	11.4%	9	8.6%	-	,	4	5.7%
FEMALE	52	74.3	30	43.0	=	15.7	4		7	10.0
TOTAL	70	70 100.0%	38	54.4%	17	17 24.3%	4	8.6%	11	15.7%
AGE										
15-24	2	2.8%	1	1.4%		-	1	1	1	1.4%
25-34	111	15.7	00	11.5	m	4.2%	1		-	
35-44	21	30.0	90	11.5	9	8.6	8	4.2%	4	5.7
45-54	22	31.5	12	17.1	85	7.2	1		8	7.2
55-64	111	15.7	7	10.0	en	4.3	1		1	1.4
65 and over	3	4.3	2	2.9		-	1	1.4		1
TOTAL	70	100.0%	300	54.4%	17	24.3%	4	5.6%	111	15.7%

TABLE VI RESPONSE BY LENGTH OF THERAPY

						REMISS	NOI			
LENTH OF THERAPY	TOTA	L PATIENTS	3	OMPLETE	M	MARKED	S	SLIGHT	Z	ONE
Up то 1 Монтн	13	18.6%	60	4.3%		1		1.4%	6	12.9%
2 MONTHS	20	28.6	12	17.1	9	8.6%	1	1	2	2.9
3 MONTHS	6	12.8	7	10.0	1	1.4	1	1.4		
4 MONTHS	7	10.0	85	7.2	2	2.9			-	
5-6 MONTHS	19	27.1	6	12.8	00	11.4	2	2.9	-	
OVER 6 MONTHS	2	2 2.9	2	2.9	1	1	1	-	1	
TOTAL OVER 1 MONTH	57	81.4%	35	\$0.0%	17	24.3%	3	4.3%	2	2.9%

TABLE VII SIDE REACTIONS NOT REQUIRING DISCONTINUANCE OF THERAPY

REACTION	NO.	* %
AGITATION	3	4.3
ANXIETY	2	2.9
FATIGUE	1	1.4
DIZZINESS	1	1.4
SOMNOLENCE	3	4.3
PARESTHESIA	1	1.4
PARKINSON-LIKE SYMPTOMS	2	2.9
Hypotension	4	5.7
NAUSEA	2	2.9
CONSTIPATION	10	14.4
DRYNESS OF MOUTH	43	61.4
PERSPIRATION	36	51.4
PHOTOSENSITIZATION	1	1.4
Eosinophilia	2	2.9

of Tofranil or the use of other drugs. Among the first group, six patients experienced severe agitation and anxiety. This was present mostly in the neurotic and involutional group and in the case of schizoaffective schizophrenics. Two of these patients also developed delusional ideation. Severe obstipation was present in one of these patients. One of the patients in our series developed clinical obstructive jaundice in absence of an obstructive lesion. The causa-

tive relationship between Tofranıı and the jaundice cannot be stated with certainty because the patient was also on small doses of chlorpromazine. Another patient developed symptoms of angina of effort and two weeks later a picture of coronary occlusion. This occurred within the first month of treatment with Tofrãnil. In the second month of therapy, one more patient developed symptoms of cerebral thrombosis with very mild effects which promptly receded. In spite of the uncertainty of causal relationship, Tofranil was immediately discontinued in both cases. Both patients continued in marked remission. One patient developed nausea, vomiting and severe headaches while on maintenance treatment for five months; alkaline phosphatase showed six Bodansky units. Treatment in this case was discontinued.

It is worth mentioning that an eighteenmonth-old child of one of our patients was found to have accidentally injested four 25 mgms. tablets of Tofranil. The stomach lavage did not appear effectual but outside of restlessness there was no side effect.

Table VII shows side reactions not requiring discontinuance of treatment. Some of these symptoms cleared after adjustment of dosage or use of other chemotherapeutic agents. The most frequent of these were perspiration, dryness of mucous membranes and constipation.

Conclusions

- 1. In the group of seventy patients treated with Tofrānil® for a period of less than one month to six months, we found a remission rate which we believe to be significantly higher than the spontaneous remission rate.
- 2. The remission rate appears related to type of depression being the highest in the endogenous type of depressions, and to duration of therapy, being the lowest in the group of patients treated for less than four weeks.
- 3. Tofranil appears to exert a "synergistic" action in patients requiring electroconvulsive therapy.
 - 4. No definite statement can be made, on

- the basis of our study, pertaining to duration of treatment with Tofranil and the rate of relapses within one year from termination of treatment.
- 5. Side reactions requiring discontinuance of treatment were present in our series in about ten percent of our patients. Minor untoward effects mostly perspiration, dryness of mucous membranes and constipation are comparatively frequent.

One patient developed clinical obstructive jaundice in whom chlorpromazine was given concurrently with Tofranil. An additional case which was discontinued for nausea, vomiting and severe headaches after five months of therapy, showed an alkaline phosphatase of six Bodansky units.

No untoward effect was noticed on blood or hemopoietic organs. 7. Tranquilizing drugs were used concurrently with Tofranil in the majority of cases and were found useful in combating anxiety and agitation coexisting with the treatment.

202 Cornelia Street

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PORTAL HYPERTENSION WITH ESOPHAGEAL VARICES IN ACUTE INFECTIOUS HEPATITIS

"Eighty-two patients with viral hepatitis were examined by telescopic esophagoscopy in a study of portal hypertension as a manifestation of the disease. Half of the patients exexamined between the first week of illness and as long as other physical evidences of disease still persisted had esophageal varices. Varices persisted longer than other physical abnormalities. All of the veins were of narrow diameter and tended to have long straight, even courses. Portal venous pressure, as measured by needling of varices, was moderately elevated, the mean of 11 cases being 250 mm. of saline solution. No variceal bleeding was recognized in the group."

WOLFGANG HAERTER, DR. MED., and EDDY D. PALMER, LT. COL., MC, USA

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Preventable Blindness

WILLIAM H. HAVENER, M.D.

Columbus, Ohio

A blind eye is a serious loss to both the patient and his community. Through knowledge of the basic principles of eye care, a significant proportion of blindness can be prevented. All medical personnel should know the warning symptoms of eye disease, the frequency with which eyes should be examined, and the first-aid steps applicable to eye injury. The following basic outlines may be helpful.

The Seven Danger Signals

The seven danger signals for which a medical physician should be consulted are:

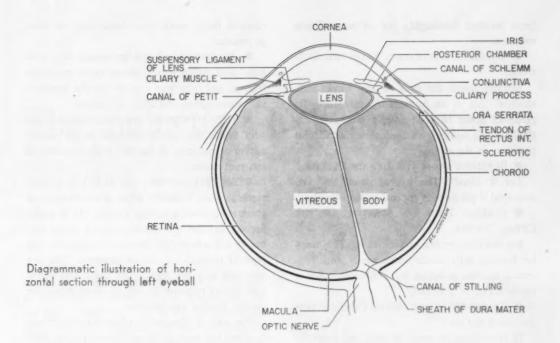
- Persistent Redness of the Eye. (Example: Dendritic keratitis. This is a stubborn infection of the cornea with herpes simplex virus. Untreated, such infections commonly leave incapacitating scars.)
- CONTINUING DISCOMFORT OR PAIN ABOUT THE EYE, ESPECIALLY FOLLOWING INJURY. (Example: Imbedded corneal foreign body. Cinders or dirt often lodge in the superficial cornea and set up persistent irritation. Infection may develop, causing serious damage to the entire eye.)
 - DISTURBANCES OF VISION
- a) Trouble seeing near or distance. (Example: Hypertensive retinopathy. Vascular damage of the retina may be one of the early signs of malignant hypertension. Discovery of this systemic disease through ophthalmologic examination will lead to proper medical care at an early optimum stage of the disease.)

- b) Fogginess of vision and rainbow-colored halos around lights. (Example: Acute glaucoma. Sudden increase of intraocular pressure is truly an emergency, since it may cause blindness within days. Multicolored halos and blurred vision are usually present in acute glaucoma.)
- c) Loss of side vision. (Example: Retinal detachment. Development of a dark curtain obscuring peripheral vision is invariably a serious sign.

Destruction of vision is progressive, and may be arrested by early care.)

- d) Persistent double vision. (Example: Brain tumor. Any of the serious causes of cranial nerve paralysis may result in diplopia. This symptom requires careful medical evaluation.)
- e) Sudden development of many floating spots before the eyes. (Example: Acute chorioretinitis. Inflammatory cells discharged into the vitreous cast tiny moving shadows upon the retina. Without treatment, extensive intraocular scarring often results.)
- CROSSING OF THE EYES, ESPECIALLY IN CHILDREN. (Example: Suppression amblyopia. If one eye is not used from early life, vision will not develop, and cannot be restored after the age of six years. Children do not "out-

Dr. Havener is Professor of Ophthalmology and Chairman of the Department of Ophthalmology, Ohio State University, College of Medicine, Columbus, Ohio.



grow" this, and should be referred to the ophthalmologist as soon as cross eyes are noted, even if they are only several months old.)

- GROWTHS ON EYE OR EYELIDS, OR OPACITIES VISIBLE IN THE NORMALLY TRANSPARENT PARTS OF THE EYE. a) (Example: Basal cell carcinoma. Slowly growing skin malignancies are often disregarded by the patient until they reach a size requiring disfiguring surgery.) b) (Example: Intraocular hemorrhage. Blood or other debris within the clear portion of the eye may be externally visible.)
- CONTINUING DISCHARGE, CRUSTING, OR TEARING OF THE EYES. (Example: Corneal ulcer. Bacterial infection ordinarily is responsible for ocular discharge.)
- PUPIL IRREGULARITIES (UNEQUAL SIZE IN THE TWO EYES OR DISTORTED SHAPE.) (Example: Iritis. Adhesions develop between the lens and an inflamed iris, with resultant distortion of the pupil. Readily visible alterations in size and shape of the pupil are not normal.)

(Note: The above examples represent but one of many diseases producing the given finding. Often multiple findings will be caused by the same disease.)

How Often Should Eyes Be Checked?

The eyes should be checked:

- Whenever one of the seven danger signals appear regardless of age.
- At birth (to detect malformations, injuries or infections).
- Between four and five years of age (to detect "lazy eyes" which occur in two percent of children and must be treated before school age).
- Every five years after the age of forty (because by far the highest incidence of blindness is in older age groups).
- As often as the patient's own medical physician recommends. (For example, annual check of eye pressure is necessary after the age of forty, if cases of glaucoma occur in the family).

First Aid in Eye Injury

• CHEMICAL EYE BURNS (acids, caustics, poisons).

Wash immediately with plain water, and continue for at least fifteen minutes. Pour the water right into the open eye. Do not go to a doctor or anywhere else until the eye has

been washed thoroughly for at least fifteen minutes.

 Wounds Penetrating Into the Eye-BALL.

Do not touch the eyes in any way! Seek medical care as an immediate emergency. If possible, cover the eye with a convex metal shield which will protect against any accidental pressure on the eye.

BLEEDING FROM THE EYE OR EYELIDS.
 Let it bleed! The eyeball itself may be damaged if pressure is applied to stop bleeding.

 Foreign Body or Scratch on the Clear Cornea.

Do not rub the eye or pick at it. This must be treated with sterile instruments and protected against infection by antibiotics. See a medical doctor promptly.

 Foreign Particle on the Conjunctiva (white of the eye).

If this is easily seen, it may be carefully picked out with something clean. Do not use a dirty handkerchief. Do not touch the clear cornea! If removal is successful and the eye is perfectly comfortable and sees well, no further treatment is necessary.

• "BLACK EYE."

See a medical doctor to be certain the eyeball itself has not been damaged.

Eye Care Personnel

• AN OPHTHALMOLOGIST (or oculist) is an M.D. who has taken additional specialized training in eye care. He is qualified in all aspects of eye care, including medical, surgical, and refractive problems. Board certification

requires three years of residency and one year of practice.

- An Optician is the technician who prepares and grinds lenses, places them in proper frames, and otherwise carries out the mechanical manufacture and fitting of glasses.
- THE ORTHOPTIST is a medical technician who assists the ophthalmologist in the examination of and care of patients with disorders of eye movement.
- AN OPTOMETRIST (or O.D.) is a non-medical man, formerly often self-trained, now graduating from a college course. He is qualified to measure the refractive error of an eye, but is not adequately trained to diagnose any type of disease—ocular or systemic. The optometrist may not legally use drops and therefore cannot measure tension or dilate pupils for careful fundus examination.

The goal of elimination of preventable blindness will not be reached until every patient with persistent eye symptoms realizes he should consult a competent medical physician. The symptoms of refractive error closely simulate the early symptoms of blinding eye disease, those of serious general bodily illnesses, or even those of mental illness. Study of case histories of preventable blindness all too often discloses the pattern of early symptoms disregarded by the patient, unrecognized by the nonmedical optometrist, and occasionally misinterpreted by a hurried physician.

Every patient with persistent eye complaints deserves a careful medical eye examination.

University Hospital 410 West Tenth Avenue



MEDICAL TEASERS

A challenging crossword puzzle for the physician. SEE PAGE 65a



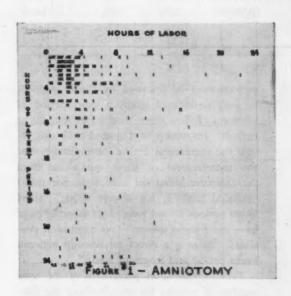
The Induction-Delivery Interval

LAWRENCE T. BROWN, M.D. Denver, Colorado

his report presents 687 attempts at induction of labor on 572 pregnancies by the various staff members at Presbyterian Hospital, Denver, during the five years 1954-1958. The survey includes inductions by: amniotomy (298 attempts); intramuscular pituitary preparation (174 attempts); intravenous pituitary preparation (74 attempts); combined surgicalmedical methods (73 attempts); quinine (68 attempts). Only patients who were multiparas are considered in this report because so few primiparas had labor induced during those five years, that any analysis of these cases would be inconclusive. These cases are mixed, including both "ripe" and "unripe" cervices. The start of progress in dilatation, an objective standard, was considered to mark the end of the latent period and the start of labor.

Two Problems

The data are analyzed to determine the relationship of the length of the latent period for each method of induction to the length of labor which follows. The literature is full of papers on induction of labor with a "ripe" cervix. But when induction is mandatory and doctor cannot wait for the cervix to become "ripe," what are the prospects? This paper also presents a comparison between inductions with a "ripe" cervix and inductions with an "unripe" cervix.



The Induction-Labor Ratio

Figure 1 is a copy of the work-sheet for the amniotomy cases at Presbyterian Hospital, Denver. It was built up by making a tally mark at the intersection of "hours of latent period" with "hours of labor" for each attempt. The general characteristics of the work-sheets for the other methods of induction are quite the same as this one for amniotomy; details from each work-sheet, revealing specific differences, are presented in Tables 1 and 2.

Inspection of Figure 1 shows that short latent

	LATENT PERIOD 1 HOUR	LATENT PERIOD 1 & 2 Hours	AVERAGE FOR ALL ATTEMPTS	
COMBINED METHODS	25%	47%	5.3 hours	
QUININE I. V. PITUITRIN	23% 22%	33% 33%	5.8 hours 7.8 hours	
AMNIOTOMY	14%	31%	6.5 hours	
I. M. PITUITRIN	10%	23%	8.9 hours	

TABLE 2

TABLE 2	LABOR OF 1 HOUR	Labor of 1 & 2 Hours	FOR ALL DELIVERIES
COMBINED METHODS	4%	30%	3.7 hours
I. M. PITUITRIN	10%	32%	4.3 hours
AMNIOTOMY	9%	29%	4.4 hours
I. V. PITUITRIN	16%	39%	4.5 hours
QUININE	12%	39%	5.1 hours

periods may be followed by short, medium, or long periods of labor; a short period of labor may follow short, medium or long latent periods. Inspection of Figure 1 will also reveal the correctness or the incompleteness, or the incorrectness of these quotations from the literature about the induction-labor ratio: "induced labor is not always short;" "short latent periods do not have short labor;" "more have more rapid labors;" "no conclusion possible;" "there is a direct relationship between latent period and length of labor."

Table 1 shows, as percentage of the total number of patients for each method, the one-hour and the one plus two-hour latent periods for each method of induction studied. Because there is often need for urgency in the induction of labor, the methods are presented with that method of induction listed first which shows the highest percentage of short latent periods.

Table 2 presents a similar analysis showing the length of labor, with the shortest average length of labor listed first.

From Tables 1 and 2 it is clearly evident that the combined methods, are the most effective. Table 2 shows that, while the average

labor is shorter, precipitous labors are less often when the combined methods are used.

"Ripe" Versus "Unripe" Cervices

Table 3 presents data on three categories of cases: Group U ("unripe" cervix); Group M ("mixed ripe" and "unripe"), subdivided as Group ML (mixed cases from the literature) and Group MP (mixed cases from Presbyterian Hospital, Denver); and Group R ("ripe" cervix). IDI stands for the induction-delivery interval, the time in hours from the start of induction to the delivery of the baby.

From a consideration of the data Table 3, it can be seen that, given a patient in whom induction is mandatory and the cervix is "unripe," the doctor may: 1. do a Cesarean section if warranted; 2. induce the patient by his favorite method after deciding that the difference between an IDI of 8.15 hours and 13.53 hours average is not significant in his patient; 3. decide that the combined method merits a try (IDI of 9.0 hours with "mixed" cervices compared with IDI of 8.15 hours on "ripe" cervices), with a preference for the surgical-medical method.

The Length of Induced Labor

Does induction of labor result in a shorter length of labor? In the literature we read: "considerably shorter;" "no appreciable difference;" "slight tendency toward short"; "less than the usual figure;" "shorter;" "no effect upon the length of labor;" "labor cannot be considered prolonged."

An analysis of 500 uninduced instances of labor in unaccelerated multiparas at term from the earliest years of my practice shows an average length of labor of 6.34 hours. An analysis of 500 with the same qualifications from the latest years of my practice shows an average length of labor of 6.1 hours. In those patients, as with the cases of *Groups U*, *ML* and *R*, labor was considered to have started with the onset of labor pains. The average length of labor for all of the patients in those three groups from the literature is 6.37 hours, quite the same as for my normal labors. The head-

TABLE 3

AUTHOR	CASES	METHOD	IN HOURS	LABOR IN HOURS	IDI IN HOURS
GROUP U (un	ripe)				
Plass (1)	486	med-MR	4.02*	6.18*	10.2
Tennent (1)	255	MR	12.7*	7.24*	19.94
Total	741		7.01	6.52	13.53
GROUP ML (mixed-litera	iture)			
Guttmacher (1)	26	Q-MR-pit	3.8	3.3	7.1
Guttmacher (4)	30	Q-MR	4.2	7.13	11.33
Diddle (5)	982	MR (some med)	4.32*	8.0*	12.32
Morton (6)	33	Q-MR-pit	1.93	3.93	5.86
				-	
Total	1071		4.23	7.73	11.96
GROUP MP (mixed-Pres	hyterian)			
Presbyterian	298	MR	6.5	4.4	10.9
n	174	IM. pit	8.9	4.3	13.2
64	74	IV. pit	7.8	4.5	12.3
s4	68	Q	5.8	5.1	10.9
- 66	73	combined	5.3	3.7	9.0
Total	687		7.1	4.3	11.4
	*				
GROUP R (ri					
Deichman (1)	100	pit	1.6	7.1	8.7
, 16	100	pit-MR	1.5	9.0	10.5
66	100	MR	4.7	6.0	10.7
66	100	MR-pit	7.7	7.7	15.4
Reycraft ®	345	MR	2.68*	4.5*	7.18
Grier (9)	95	MR (some pit)	1.0	4.66	5.66
Husbands (18)	53	MR (half pit)	2.82*	3.19*	6.01
Daichman (11)	30	MR	2.57*	4.48*	7.05
Total	1423		2.87	5.28	8.15

^{*} Calculated from data in the reference.

start of a "ripe" cervix shows only one hour shorter labor.

The First Stage of Labor

We were taught, and our experience in practice confirms it, that you cannot be sure that a woman is in labor until you find progress in dilatation. That rule was used as the standard for determining the end of the latent period for all of our patients in *Group MP*. With that in mind, a comparison of *Group ML* with

Group MP reveals an interesting probability. For both groups, the induction-delivery-interval is essentially the same: 11.96 hours and 11.4 hours. For Group ML (onset of pains), the latent period averages 4.23 hours; for Group MP (start of dilatation), the latent period averages 7.1 hours. This means that it takes 2.87 hours of labor pains to produce a start of dilatation (to accomplish progress toward effacement, descent, positioning, moulding, etc.).

Conclusions

- 1. Short latent periods may be followed by short, medium, or long periods of labor.
- 2. Short periods of labor may follow short, medium or long latent periods.
- 3. The most effective method of induction is the combined method, with a preference for the surgical-medical technic.
 - 4. Induction does not result in shorter than

average length of labor.

- 5. The "unripe" cervix does not present too formidable a problem.
- 6. About half of the first stage of labor is preliminary to the start of dilatation.
- 7. Modern girls have a length of labor insignificantly shorter than their mothers had.

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 1134 Republic Building



MEDIQUIZ . . .

Working alone or with your colleagues you'll find this is no snap. PAGE 95a

Hypertrophic Osteoarthropathy

ANDRIES I. ROODENBURG, M.D., M.S. (Med.), F.A.C.P. Rochester, New York

he history of hypertrophic osteoarthropathy begins with Hippocrates' description of clubbing of the terminal phalanges in a case record of empyema of the chest.1 From that time on clubbing of the fingers has been linked to disease of the thoracic organs, especially the lungs. Nothing was added to the knowledge concerning this phenomenon until late in the nineteenth century. In 1889 Bamberger2 presented to the Imperial and Royal Society of Physicians in Vienna two instances of bronchiectasis with "drumstick fingers." In addition, it was observed that the long bones, especially those of the forearms and lower legs, were painfully thickened. Bamberger was of the opinion that the osseous changes were of a similar nature as the clubbing of the terminal phalanges. He emphasized the importance of differentiating such cases from acromegaly.

Once his attention had been drawn to the combination of clubbing and painful thickening of bones he observed more such patients. He had depended on patients having advanced changes, because diagnostic roentgenography had not made its appearance yet. This should be taken into consideration when we read that in many instances of pulmonary or cardiac disease he observed digital clubbing only. Osseous changes were seen mainly in connection with bronchiectasis and certain instances of cardiac disease.

Anatomically the bone changes appeared to

consist of an ossifying periostitis. The long bones of forearms, lower legs, hands, and feet were mainly involved. Multiple venectasies were frequently found in the soft overlying tissues.

Almost simultaneously with Bamberger's report a paper dealing with the same subject appeared.3 The author, Pierre Marie, presented a number of case records of pulmonary disease who also had clubbing of the terminal phalanges, thickening of the long bones and arthralgia. He coined the name secondary pulmonary hypertrophic osteoarthropathy, thus expressing his conviction that the changes of bones and joints were secondary to a pulmonary disease. Independently from Bamberger, Marie too stated that the prime purpose of his presentation was to differentiate the osteoarthropathy from acromegaly. Scrutinizing Marie's paper, one cannot escape the suspicion that it was more Marie's flamboyant enthusiasm rather than careful analytical observation that gave birth to a new name for an interesting syndrome. Several of the presented case records have no apparent link with pulmonary disease. Other primary conditions not being evident, one wonders whether those may have been examples of primary hypertrophic osteoarthropathy.

The next milestone was the publication of Edwin A. Locke, published in 1915.⁴ The scope of this study was such that very little of what has been published since has added

materially to our knowledge of hypertrophic osteoarthropathy. The clinical description mentioned clubbing of the terminal phalanges, thickening of the distal portions of the forearms and lower legs. The skin was sometimes shiny and red. On pressure, and also spontaneously, it might be extremely painful. The peripheral joints, especially the larger ones, might be red, swollen, and painful.

Roentgenographic and anatomical study showed that the ossifying periostitis was slowly progressive. It usually began in the distal portions of the diaphyses of the long bones of the forearms and lower legs. Later it involved also the other bones of the extremities and, in some cases, nearly all the remaining bones of the skeleton. Later in the disease, coincident with the periosteal proliferation, there was a rarefying osteitis of the shafts, with fatty changes in the marrow. While at first the new subperiosteal bone was sharply demarcated from the old shaft, two to three years later the two are more or less fused and in most places indistinguishable. This altered the entire structure of the bone. In the most extreme instances of the disease cases scarcely anything of the appearance of the original bone remained. Instead, the osseous tissue appeared very thin and of a coarse, irregular structure.

The clubbing was due entirely to changes in the soft tissues. At times the bone of the distal phalanges underwent changes essentially consisting of a proliferation of the distal half, producing "burr"-like processes.

The affected joints showed thickening of the periarticular tissues and effusions. In the most advanced cases, the cartilage was eroded, lipping was observed, and a moderate degree of ankylosis was found to be not uncommon.

The report of an anatomical study of seven patients having secondary hypertrophic osteoarthropathy by Gall, Bennett, and Bauer in 1951 filled in many details, but did not alter the picture fundamentally.⁵

The new osteoid tissue is deposited first upon the extensor surfaces of the affected bones. The new bone has its own highly vascular marrow in which hemopoiesis may be seen occasionally. Later the peripheral bone becomes more nearly continuous, forming a pseudocortex. A cement line separating the pseudocortex from the cortex remains visible for a long time but in the long run, this too may be lost. At points of tendon insertion, the lesions assume the appearance of intratendineous osteophytes.

In the joints edema of the subsynovial tissues with infiltration by lymphocytes and plasma cells may be observed. Sometimes there is proliferation of the synovial membrane, leading to villous hypertrophy and even pannus formation. The arterial walls are thickened. The articular cartilage may show identical changes with those of degenerative arthritis. Focal resorption of subchondral bone is observed frequently to a degree rarely seen in degenerative arthritis.

The question whether simple clubbing and hypertrophic osteoarthropathy were two different conditions or just two aspects of the same condition was also answered by Locke. Thirty-nine patients showing only digital clubbing were subjected to roentgenographic skeletal surveys. Twelve of them showed evidence of a proliferative periositis of some of the long bones of the forearms and lower legs of exactly the same type as seen in full-blown hypertrophic osteoarthropathy. Therefore, Locke argues, that: "considering

- that clubbing of the fingers always occurs in hypertrophic osteoarthropathy,
- that this clubbing is identical with that found in hippocratic fingers except perhaps in the degree of development,
- that hippocratic fingers and osteoarthropathy are associated with the same general group of diseases, and
- 4) that 12 of a series of 39 cases of simple clubbing examined radiographically showed osseous changes in certain of the long bones of precisely the same types as found in osteoarthropathy,

it follows that the two conditions should be regarded as but different stages of the same disease."

This, incidentally, also demonstrates that the periostitis is frequently painless. The pain asso-

ciated with the syndrome is mainly due to the arthritis.

Hypertrophic osteoarthropathy is known in a primary form, first reported by Touraine, Solente, and Golé in 1935. A remarkably thick and heavily grooved skin was described additional to the clubbing arthritis and periostitis. Other primary cases have been observed since. It develops mainly in adolescent males, and is often associated with gynecomastia and a female distribution of hair. Libido and sexual potency are not impaired. The thickened skin over the affected areas is hyperidrotic.

The patients do not have pain, but notice a peculiar heaviness and clumsiness of the extremities.

Unilateral clubbing is seen in connection with homolateral vascular lesions such as aneurysmal dilatation of the arch of the aorta, the innominate, or subclavian arteries. Sporadic instances of the disease were observed in brachial arteriovenous fistula and carcinoma of the pulmonary apex.⁹

Simple clubbing occurs as a familial feature. It is inherited as a mendelian dominant. It is not associated with osteoarthropathy.

Secondary hypertrophic osteoarthropathy has been observed with a large number of different conditions.9, 10 The overwhelming majority of patients, however, fall into four groups of primary disorders: the smallest group is that of cholangiolitic cirrhosis, somewhat larger is the group of diarrheal bowel disease (ulcerative colitis, sprue, etc.). The next two groups are of far greater importance. Subacute bacterial endocarditis and congenital cardiac disease with a right-to-left shunt are frequently associated with secondary hypertrophic osteoarthropathy, in some series even more frequently than in the last and most important category, that of pleuropulmonary disease. The possibility has been considered that the joint pain and swelling seen in some cases of subacute bacterial endocarditis might be explained on the basis of mild and transient osteoarth-

Classically, the most important group is the

one of pleuropulmonary disease. Especially in recent times most reports have dealt with malignant disease of the lung or pleura. However, in the earlier part of the twentieth century the attention was focused on infectious disease such as long standing infection of bronchiectasis, pulmonary abscess, empyema, etc.

The shift of emphasis to malignant disease has been brought about by the more efficient treatment of infectious disease, better diagnostic methods, and the real increase of primary pulmonary malignancy.¹¹ Secondary hypertrophic osteoarthropathy is conspicuously rare in metastatic involvement of lungs or pleura.

In the combination with malignancies of the lung or pleura secondary hypertrophic osteoarthropathy finds its greatest diagnostic significance. Several authors have come to the conclusion that when the osteoarthropathy develops rapidly and especially when it is very painful, one usually is dealing with a primary malignancy of the chest.10, 12-14 Even when it appears in patients who have had almost uninterrupted infectious disease of the chest for a lifetime, it may indicate the development of a malignant neoplasm. The pain of the osteoarthropathy may be the first symptom. Intensive search for the tumor with bronchoscope and roentgenographic techniques may not reveal it and surgical exploration of the chest must be recommended.

Those cases are often diagnosed as rheumatoid arthritis. Unfortunately, adrenal steroids will relieve the pain of the arthritis somewhat. Thus, precious time may be lost.

The diagnosis of hypertrophic osteoarthropathy rests on the recognition of clubbing and the roentgenographic appearance of the long bones especially those of the forearms and lower legs. Clubbing is essentially a hyperplasia of the soft tissues of the terminal phalanges, including the nailbed. This decreases the normal angle of 15° between the long axis of the digit and the nail root. The volar pad is frequently bright red. The nail has a cyanotic appearance and may be heavily ridged. The nail itself may be longitudinally and trans-

versely convex (parrot-beak) or concave (watch-glass). This probably depends on the original shape of the nail and the speed of the change. It may be asymptomatic or the patient may complain of a burning sensation.

The periostitis is easily detected on the proper x-ray films. Roentgenograms of the affected joints in the early stages have a normal appearance except for swelling of the periarticular tissues, like in early rheumatoid or gouty arthritis.

The primary osteoarthropathy can be differentiated from the secondary condition only by the appearance of the skin of the face (a "prematurely aged" appearance)⁷ and the extremities and must be further distinguished from leprosy and cutis verticus gyrata.⁸ The differentiation from the secondary syndrome is extremely important because, as has been stated above, the secondary syndrome may be the first evidence of a malignant pulmonary neoplasm. Fortunately, the latter condition is extremely rare in young adolescents. The laboratory findings of blood and urine are those of the primary condition.

There is no specific treatment of secondary hypertrophic osteoarthropathy. When the underlying disease is eradicated the signs and symptoms gradually recede. Recently it has been found that when the vagus nerve was cut below the aortic arch in patients having inoperable carcinoma of the chest, the osteoarthropathy would disappear. This is not only of interest because of the etiological implications, but also because it may be used as a palliative procedure.

The osteoarthropathy not infrequently distresses the patient more than the primary disease.

The pathogenic mechanism of this interesting syndrome is unknown. It has been produced experimentally in dogs by making an anastomosis between the pulmonary artery and the left atrium, thus producing a right to left anastomosis. Mendlovitz found an increased vascular blood flow in affected extremities. Rasmussen and Semple and McCluskie found a decreased arteriovenous oxygen difference of the syndrome.

ferent in affected extremities. It promptly returned to normal after elimination of the primary mechanism.

The combination of increased blood flow and decreased arteriovenous oxygen difference indicates the existence of arteriovenous shunts. One may assume that tissue hypoxia may be etiologically significant. Tissue hypoxia also may exist in cardiac disease with right-to-left shunt, in pulmonary arteriovenous fistulas²³ and in the erythremia secondary to atmospheric hypoxia.⁹

The same idea led Maurer to theorize that in subacute bacterial endocarditis, intravascular rouleaux formation would prevent effective oxygen exchange between erythrocytes and tissues.²⁴ Flavell's work,¹⁵ mentioned above, demonstrates quite clearly that the vagus nerve is implicated. It is possibly a part of a reflex arc, the stimulus of which results in opening up of arteriovenous shunts in the peripheral tissues.

An endocrine mechanism has been postulated because of the observation of feminine characteristics in adolescent males with primary hypertrophic osteoarthropathy. A few cases of secondary hypertrophic osteoarthropathy with simultaneous development of gynecomastia have also been recorded.^{20,21} Estrogen or related substances were considered as etiological possibilities by Bean²² who observed the combination of cutaneous spiders, palmar erythema, and clubbing in cirrhosis of the liver.

The possibility seems strong that tissue hypoxia plays a role in the pathogenesis of secondary hypertrophic osteoarthropathy. This may be the consequence of prolonged exposure to lowered atmospheric oxygen content as in the erythremia of high altitude. Chronic blood hypoxia may on occasion arise in the lung or in the circulatory system due to central right-to-left shunts. Peripheral arteriovenous shunts may produce tissue hypoxia even though the arterial blood is sufficiently oxygenized. The nervous system at times appears to play a part.

The participation of the endocrine glands

has been implied, but this is only conjecture.

At the present time the most that may be said is that the pathogenesis of primary and

secondary hypertrophic osteoarthropathy is not understood.

Tissue hypoxia is probably of etiological significance.

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176 South Goodman Street



LATENT NEPHRITIS TREATED WITH PREDNISOLONE

"In a patient with latent nephritis, blood and casts disappeared from the urine during treatment with prednisolone. Evidence is given to suggest that the drug had a direct effect on the improvement of glomerular permeability.

It is considered that more extensive trials would be justified."

M. J. REE

Brit. Med. J. (1959), No. 5133, P. 1327

Discoid Lupus Erythematosus

MATTHEW A. OLIVO, M.D., Camden, New Jersey

The local treatment of discoid lupus erythematosus with methyl prednisolone

In recent years the antimalarial drugs have provided physicians with an effective form of therapy in the treatment of chronic discoid lupus erythematosus. However, there are occasional instances in which the plaques of discoid lupus erythematosus persist in spite of conventional doses of chloroquine, hydroxychloroquine or quinacrine. In these latter patients, the initial rate of improvement of the disorder is not sustained. A phase is reached

where a maintenance dose of the antimalarial drug ceases to produce further regression of the lesions.

The following report is based on the clinical study of seven instances of discoid lupus erythematosus treated by the injection of methyl prednisolone into the lesion. Each of these patients had been receiving chloroquine, 250 mgms. to 500 mgms. per day with persistence of the lesions at the time this treatment was instituted. In these seven cases, methyl prednisolone solution administered into or directly beneath the lesions produced disappearance or definite improvement of the treated plaques.

A 25-gauge needle and syringe were used

RESPONSE OF DISCOID LUPUS ERYTHEMATOSUS LESIONS TO METHYL PREDNISOLONE

CASE	Sex	AGE	RACE	LOCATION	Previous Therapy	DURATION OF ANTIMALARIAL THERAPY
1.	F	49	w	Chin	Hydroxychloroquine Chloroquine	Five years
2.	F	47	w	Nose	Chloroquine	One year
3.	F	42	N	Scalp	Hydroxychloroquine Chloroquine	Two years
4.	M	41	w	Cheeks, Neck	Chloroquine	Seven months
5.	F	33	w	Cheek	Chloroquine	Two months
6.	F	39	N	Chin	Chloroquine	Two months
7.	F	52	w	Shoulders	Chloroquine	Two months

to deposit the material into the corium just beneath the epidermis. The material consisted of 20 mgms, methyl prednisolone and one percent procaine per cc. of solution. Usually two to three cc. of solution were sufficient to treat a plaque 2.0 cm in width. When the patient returned after two weeks, the untreated portion of the plaque or other lesions of discoid lupus erythematosus were treated. Usually two treatments were sufficient to heal an individual plaque.

Everyone of the patients in this group had characteristic clinical features of discoid lupus erythematosus with the face, neck, ears, or scalp as the areas involved. None of the patients had constitutional manifestations or laboratory evidence of systemic lupus erythematosus. Three of the patients had additional confirmation of the disorder in the form of histological examinations.

The initial patient had lesions of discoid lupus erythematosus on the chin which had persisted in spite of therapy with chloroquine or hydroxychloroquine during a period of five years. The two plaques on the chin were injected with methyl prednisolone solution and the result was so encouraging that a trial of

the same medication was attempted in the other cases.

The second patient had developed a new plaque on the bridge of the nose while on a maintenance dose of chloroquine, 250 mgms. per day. Patient number three had been treated continuously for two years with chloroquine or hydroxychloroquine for discoid lupus erythematosus of the scalp and forehead. The lesions on the face had healed but two of the plaques on the scalp had continued to show activity. After seven months of therapy with chloroquine, patient number four still displayed a number of active lesions on the face and neck.

Although there were only three patients in this group who should have been properly classified as resistant to prolonged therapy with oral antimalarials, patient number four has been included because of his unsatisfactory response to conventional therapy after a period of seven months. The lesions of all four patients healed after the intralesional injection of methyl prednisolone according to the method described previously.

Adjuvant therapy with methyl prednisolone was instituted in cases five, six and seven to accelerate the involution of the plaques that continued to be infiltrated and associated with symptoms of itching and tenderness, after several months of chloroquine therapy. In these three cases the disorder was responding to antimalarial therapy, but there was a definite dimunition of the erythema and infiltration of the lesions injected with methyl prednisolone that did not occur in the untreated plaques.

Two of the patients in whom plaques of lupus erythematosus were treated with only procaine hydrochloride solution, failed to show any demonstrable change. Although this is a small percentage of control patients, procaine hydrochloride solution has been used for ob-

Number of Treatments		
WITH METHYL PREDNISOLONE	IMPROVE- MENT	REACTION
2	100%	None
1	100%	None
3	100%	None
2	100%	Fine telangiectases in two plaques
1	90%	None
1	70%	None
1	90%	None

Dr. Olivo is an Associate, Department of Dermatology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

Methyl prednisolone (Depo-Medrol®) was made available for this study by Porter F. Crawford, M.D., The Upjohn Company, Kalamazoo, Michigan.

taining biopsy specimens in many cases of lupus erythematosus in the past without producing any improvement in the lesions.

Systemic reactions were not observed in any of the seven patients, even though a total of 80 mgms. of methyl prednisolone was injected into several lesions at one treatment. The explanation for this appears to be that the steroid solution injected into the lesions apparently is absorbed slowly enough that systemic side effects do not usually occur.

In common with other steroid preparations

injected locally, the subcutaneous administration of methyl prednisolone solution is at times followed by epidermal atrophy. The appearance of the lesions in this group of cases treated with methyl prednisolone subcutaneously did not differ markedly from lesions of discoid lupus erythematosus that had healed with only oral antimalarial therapy. In two of the plaques treated with methyl prednisolone solution, several fine telangiectases were noted. However, this could have been a sequella of the lupus erythematosus process itself.

Summary

Methyl prednisolone solution administered into or directly beneath the lesions of seven patients who had discoid lupus erythematosus, produced disappearance or definite improvement of all the treated plaques.

518 Cooper Street



ISOLATION-PERFUSION TECHNICS IN TREATMENT OF CANCER

- "1. Technics for isolating and perfusing the limbs, lung, pelvis, and breast have been developed for the treatment of regionally confined cancer. A method of perfusing the entire body for treatment of disseminated tumors has been developed also.
- 2. During the past one and one-half years, 7.3 patients with malignant tumors have been treated with chemotherapeutic agents administered by these technics. There were 37 carcinomas, 18 melanomas, and 18 sarcomas. The agents employed are HN₂, PAM, TSPA, Actinomycin-D, and 5-Fluorouracil.
- 3. Among the 73 cases, 56 were treated for palliation of far-advanced malignancies and 17 were perfused in conjunction with the exterpation of primary lesions. Thirteen patients have died; among the 60 patients remaining, 22 are well and the lesion appears to be controlled; in eight the disease is quiescent, and in 30 it is recurrent."

OSCAR CREECH, JR., E. T. KREMENTZ, R. F. RYAN, KEITH REEMTSMA AND J. N. WINBLAD

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A Holistic Approach to the

Human Personality

Comparative anatomy is concerned with the morphological similarities and differences between animals and humans. Comparative psychology, if there were such a subject, would have as its topic the similarities and differences in attitudes and behavior of animals and humans.

When we speak of animals per se we certainly use a sweeping term. There are, of course, great differences in the modes of living of different species and subspecies; however, we must refrain from becoming too specific so as to concentrate on the comparison between animals and humans.

When I speak subsequently of animals, I will mean above all animals in their natural habitat, free from human beings' attempts to domesticate them.

We can distinguish four different aspects in the life of any animal that will remain basically the same throughout the animal kingdom although they vary, of course, according to the individual kind.

First, if we speak of mature animals we will immediately postulate physical health as one of the requirements for survival. An ailment or injury must be only temporary if it is not to disqualify the animal from the struggle for life. In the selective process of life, the fittest survive and the weak and sick are eliminated.

Second, all those animals that basically exist in groups or herds, and thus depend for their existence upon one another, must get along with one another. Naturalists have described how herd instinct at times leads to ostracism often tantamount to death—or to outright kill-



WALTER J. GARRE, M.D. Seattle, Washington

ing of the individual animal. We can, therefore, postulate that animals that exist in groups must have attitudes compatible with the requirements of the group.

But the need for proper relationships extends beyond the animal's own group to members of other species and to nature and its forces at large. I am well aware that these attitudes have their limitations-e.g., the continuous eat and be eaten life cycle of animals, as well as the overwhelming natural catastrophies that leave vast trails of animal corpses behind. Nevertheless, to a certain degree, the alert and mature animal will be able to dodge dangers and, on the other hand, take advantage of opportunities which are presented through contact with members of other species and with natural forces at large. Examples are animals' flight from threatening forest fires, droughts, and floods; their taking of protective measures in hailstorms; and their alertness and caution

when they come into contact with members of other species.

Insofar as it applies to the animal's relationships with members of its own species, the second requirement for survival could be called social health. When it extends to the animal's relationship to the outside world at large, it can be considered a subdivision of mental health. We human beings tend to call all of these reactions in animals instinctive, and I wonder whether this term is not applied somewhat with the connotation that human beings are entirely different from and superior to animals. The reader at this point should not feel with dismay that he has surprised me in an attempt to equate human beings with animals. I am well aware of the differences—the purpose of this article is to try to point them out. However, lowering the object of comparison so that we may gain relative stature does not seem justified.

The third characteristic that we can legitimately postulate as indispensible for the animal's successful survival is its ability to gather its food according to the particular characteristics of its own species. We can call this attitude and ability the animal's economic outlook, and it is actually closely related to the animal's general relationship to the outside world. Nowhere among animals in their natural habitat do we find individuals that are unwilling to feed themselves and that are, therefore, fed by othersunless they serve some useful purpose to the others. The drones in the beehive come closest to such a parasitic existence; however, they are fed in order that one at least may participate in the wedding flight with the queen. In other words, if parasites are permitted, it is only to the extent that they serve the group's purpose, and in this sense they are no longer parasites. If the animal did not serve any useful purpose it would, by not providing for its own economic existence, seal its doom.

And, last but not least, the fourth basic aspect of animal life is the endeavor to keep the species surviving, which means reproduction. We cannot imagine any normal animal not being dedicated to this issue. But even here

there are subdivisions. I again take as my example the drones, where only one out of a hive will be chosen to fulfill its sexual potentialities, while the others represent nature's way of making candidates redundantly available. Thus they will be, while not active participants, the backlog and multiple insurance of availability of candidates and thus of survival of the species. They again serve the purpose of the species even though they are only potential reserves.

If we now apply these four basic requirements for species survival in the animal kingdom to human beings, we can state that the following requirements must be met in order for us to speak of a healthy human being: (1) physical health, (2) social and mental health, (3) economic self-reliance, and (4) reproduction. Reproduction, though it comes last, is not least; without it there would be no next generation, no human life on earth. But even if there were a human being who could fulfill all four criteria, he would not be different in any essential way from an animal. I believe that the specific human characteristic, the characteristic that is unique for the species homo sapiens, is the awareness of one's own existence, as in Cartesius' famous "Cogito ergo sum." This self-awareness could be equated to the well-known psychiatric entity "ego strength." Freud has shown us that the ego strength depends on the degree to which the individual is able to forfeit early satisfaction of the demands resulting from basic personality drives, which Freud called the "id," in order to receive later gratification on a more integrated social level. To the degree that parents get gratification from the privilege of having and raising children, without ulterior motives, to that degree will their contributions be experienced not as sacrifices but as joys. To the same degree their children will receive this ego strength, this awareness of their own personality: "I am somebody, my parents enjoy my presence." This building up of ego strength in the child is based on the emotional investment his parents have available for him. The amount of emotional investment available will depend on the amount the parents in their turn received as children, and so forth.

For this emotional energy to be available. it must have come from somewhere. The total amount of potential productive energy, sometimes also called the libido, cannot have changed during the evolution of human beings from their animal origin. Unless we postulate, without justification, an external source of energy, we have to come to the conclusion that only a shifting of the libidinal distribution has taken place. Thus self-awareness, the fifth and last requirement, so specific in distinguishing human beings from animals, has its source in a partial or total depletion of the energy originally supplied for the four basic requirements or any combination thereof, drawing on physical energy, social-mental energy, economic energy, or reproductive energy to make up for the deficit. The infant senses the degree to which it is not accepted and to that extent is pervaded by the feeling of threatened destruction which I term the basic anxiety.

This basic anxiety can make its appearance in one of the four forms or any combination thereof. It can be focused on the individual's physical health, and conversion symptoms and ill-health will result. Or the anxiety can be concentrated primarily on the social-mental aspects of the individual's life, and the result will range anywhere from the mildest neurosis to the most severe sociopathy and mental disturbances.

The individual whose basic anxiety centers itself on his economic capacity is well known to welfare agencies. Often these people are in comparatively good health, get along quite well with fellow humans, and may even reproduce extensively, but economically they are public liabilities. This is an example of how the various aspects of human life blend into one an-

other; the basic sociopathic quality of such attitudes is obvious.

As concerns the fourth aspect of life, reproduction, we all know of many individuals who enjoy good physical health, have made worthwhile adjustments in the social - mental sphere—perhaps even with considerable contributions—and whose economic strivings are self-supporting and irreproachable. However, they do not reproduce and may even avoid any contact that in any way might lead to reproduction. We see that these individuals, sizeable though their contributions may be, would still through their infertility end the existence of human life as known to us.

Since the basic anxiety will find as its outlet not merely one but any combination of the four above mentioned aspects of life, we will find any constellation of symptomatology. However, even greater vistas are opened up by a further fact: the outlets for basic anxiety are not fixed but are, rather, interchangeable, according to environmental circumstances and influences. This explains the rather startling conversions and changes we observe at times. A few examples will serve: Improvement in patients having rheumatoid arthritis due to corticosteroid therapy is sometimes accompanied by outright psychotic symptoms. An increased determination to work and a more acceptable social and mental attitude will at times be paid for by lessened physical health. Reproduction is all too frequently associated with physical or mental ill-health. In fact, the bulk of medical and legal practice and a good part of welfare work are based on the ill-health, socialmental disturbances, economic failure, and reproductive disturbances which are manifestations of emotional stress.

Conclusions

My conclusions are as follows: The basic anxiety is the prime etiological agent in disturbances involving the four basic aspects of life, while the disturbances themselves are potentially interchangeable. Furthermore, human health in the broad sense must encompass the physical, social-mental, economic, and reproductive aspects of life. Since the originally available supply of animal energy, the "libido," must be drawn upon for the specifically human

trait of self-awareness, the four basic aspects of life must be at the best somewhat curtailed, at the worst tremendously and disasterously curtailed, and to some degree imperfect and unbalanced even under optimal conditions. Human beings are not perfect, never can be perfect, and never will be perfect, and it is only in the degree of imperfection and its distribution that they differ.

1120 Cherry Street



PENICILLIN-RESISTANT STAPHYLOCOCCI

"In 1952, in a report on hand infections from the Oxford accident service, it was found that, among 82 patients with Staph. aureus infections in which penicillin sensitivity was tested, there was no resistant strain.

In 1957 Staph, aureus resistant to penicillin was obtained from 81 (30%) of 267 outpatients with hand infections from the same unit. This group did not include "hospital staphylococcus contacts."

Of 187 outpatients from the general population who had not had penicillin for the hand infection under review, 27% grew penicillin-resistant strains of Staph. aureus, as compared to 37% of the patients who had had pencillin therapy.

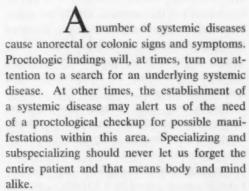
Between January, 1954, and April, 1958, 56 nurses with proven Staph. aureus hand infections were treated as outpatients in the accident service; in this group 51 (88%) of the 58 strains of staphylococci were found to be resistant to penicillin. A further analysis of these findings showed that from January, 1956, until April, 1958, 30 out of 31 nurses (97%) with Staph. aureus hand infections had a penicillin-resistant staphylococcus.

With "hospital staphylococci" so often resistant to penicillin, all available methods should be used to reduce hospital infection. The introduction of antibiotics has increased the importance of all forms of aseptic and antiseptic precautions."

> A. J. BUHR and J. C. SCOTT The Lancet (1959) No. 7081, P. 1021

Manifestations of Systemic Disease in Proctology

FREDERICK VOGEL, M.D., Brooklyn, New York



In debility due to advanced age or due to disease, physical or mental, there may be relaxation of the anal sphincter muscles with or without *incontinentia alvi*. There may be redundancy of the rectal mucosa; there may be anal prolapse or procidentia; there may be hemorrhoids; leukoplakia; or malignant changes of the anal area. Constipation, dyschezia may cause fecal impaction and consequently proctitis.

The habitual use of harsh laxatives of the senna group may produce the characteristic sigmoidoscopic picture of a melanosis of the colonic mucosa; this is reversible.

Allergy, in particular food allergy, may be the cause of mucous colitis or colitis gravis with hemorrhage, loss of mucus, blood, water, and electrolytes. On sigmoidoscopy, the characteristic picture of edema, hemorrhage, ulceration, pseudo-polyposis may be seen. As complications there may be anal eczema, pruritus, abscesses, fistulas. Arthritis may be present. Allergy is possibly the chief factor behind pruritus ani with its characteristic picture of lichenification of the perianal skin, exudation from surface erosions, small fissures, etc. Intestinal bleeding, the topical source of which may never be traced, may be allergic. On sigmoidoscopy, one may sometimes notice small, igloo-shaped elevations of the mucous membrane which may be an allergic manifestation.

Anemia may be recognized from pallor of the rectal mucosa. It may be the result of prolonged or massive bleeding from hemorrhoids, polyps, carcinoma, ulcerative processes.

Avitaminosis (B₂) may produce diarrhea.

On sigmoidoscopy, there may be atrophy of the mucous membrane with the network of blood vessels shining through.

Cystic fibrosis of the pancreas has been observed to be associated with anal prolapse in children.

Familial multiple recto-colonic polyposis has been found in connection with melanosis of the lips and oral cavity. It seems to be a systemic abnormality.

Periarteritis nodosa with hypertension, anemia, bronchial asthma, granulomatous nodules in various tissues, may show proctologic manifestations resembling ulcerative colitis. Cirrhosis of the liver with vena porta obstruction is known to cause hemorrhoids.

Leukemia of various cellular types may be manifested by polyp-like rectal growths. Cellular infiltration of the anal and perianal areas may simulate an infectious abscess, or a fistula.

In disturbances of serotonin metabolism presence of carcinoids in the rectum and colon may be noted.

Diabetes mellitus and biliary tract disease may be associated with anal pruritus, with or without the characteristic changes of perianal skin.

A psychoneurosis may be manifested in various ways: such as mucous colitis; colitis gravis; constipation, fecal impaction; anal pruritus; and as the psychoanalysts have put it, in fissure-inano or hemorrhoids, as an expression of anal aggressiveness.

Addiction to certain drugs may result in constipation and fecal impaction. The same may also be caused by prolonged medication of the Belladonna group in Parkinson's syndrome.

Tabes may produce colonic symptoms or signs. Anesthesia of the anal area may occur with loss of sphincter tone, disturbed desire for elimination, and/or incontinence.

In psychosexual disorders, relaxed anal sphincter may be found in homosexuals. There may be rectal gonorrhea with spasm, pain, purulent discharge; ulcerations. Condylomata acuminata are not uncommon. Active and passive impalement of foreign bodies, sometimes of fantastic size and shape, e.g., soda bottles, water glasses, etc., may occur as a result of drunken pranks. Perianal abscess and fistula may result.

Tuberculosis is pulmonary in origin if the human strain is the agent. The intestines may be affected secondarily. Tuberculous manifestations may appear in the rectum and the ileocecal area. In the ulcerative form, the ulcers are ragged with undermined edges on which there may be tubercles. The ulcers are horizontal (circular). Rarely there may be granulomatous tuberculosis which must be differentiated from Boeck's sarcoid, chronic enteritis, or non-specific granuloma; which may be difficult.

In schistosomiasis (Bilharziasis) the infection occurs through the skin and invades the system through blood and lymph channels. The liver, the lungs, and the brain may be involved. Involvement of the intestines, chiefly the colon, is secondary. There may be diarrhea, intestinal bleeding, formation of polyps, and if they slough, ulcers. In many cases, no macroscopic lesion may be found at the invaded rectal mucous membrane.

Syphilis may show primary anal chancre; there may be condylomata lata; proctitis; ulcers; strictures; there may be gummatous colitis; relaxed sphincter in tabes.

Lymphogranuloma inguinale or Nicolas-Favre disease is caused by a filtrable virus. The infection may be confirmed by Frei test, which, however, may be positive also in ornithosis. Anorectal manifestations are: buboes; elephantiasis; esthiomene; ulcerous proctitis; stenosis of the rectum.

In measles, Koplik's spots may appear at the rectal mucosa, as well as in the buccal cavity.

136 Henry Street



A new agent for aborting attacks of . . .

MIGRAINE

Probably the most common form of vascular headache seen in the field of medicine is migraine. To be more specific, it would be correct to say that the most common form of this type of headache is the so-called "migraine-tension" type of headache. I say this because most patients having migraine have some element of tension associated with it. Certainly more is found in medical literature about this form of headache than any other. In spite of this, plus the fact that some men have spent their lives investigating this problem, the exact cause of migraine is still unknown.

igraine is actually a common condition for the average physician to come into contact with in his every day practice. However, too frequently we find a patient who has not been properly diagnosed. This may be due to the fact that the patient has failed to tell his case history properly to his physician. The patient may be entirely too vague in the description of his attacks and as a result of this, no physician could obtain a complete history of the case. This is indeed very unfortunate because the case history of the patient is the most important part of every case-record of migraine, so far as making a correct diagnosis is concerned. Actually there is little or nothing of a positive nature obtained from the physical examination, or any form of laboratory tests unless accompanied by an informative case history.

Therefore, to discuss the management of any problem of migraine, we have to start with the problem of a correct diagnosis. There are ROBERT E. RYAN, M.D.

St. Louis, Missouri

certain fundamental points which are brought out in any case history of a classical picture of migraine. Probably the most common part of the symptomatology of a true case of migraine are the gastrointestional disturbances. Practically all of the patients have nausea and a good many have vomiting. For this reason, migraine is frequently referred to as a "sick headache" by the patient.

There are certain ophthalmological symptoms seen in a classical picture of migraine. Probably the most common of these is photophobia which is usually present during the actual headache attack. Scintillating scotomata are experienced by many of these patients, usually in the prodromal stage. Other ophthalmological symptoms may consist of hemianopsia and blurred vision but these are not as common as the first two mentioned.

The head pain of migraine is throbbing and periodic in nature. It is hemicranial and usually last from several hours to several days. The pain is usually rather severe and is located in the frontal, temporal, or orbital area.

In most migraine patients, there is an element of nervous tension present and this has to be recognized by the physician if proper treatment is to be instituted.

Migraine is more frequently seen in women than in men, and in women the attacks are frequently associated with the menstrual period. The attacks usually come on just preceding the actual period or during it. Emotional disturbances play an important part in the average history of migraine.

These are the so-called cardinal symptoms of migraine and they should be merely mentioned, because we cannot have proper management of the problem if we do not have a proper diagnosis. This proper diagnosis cannot be made if the symptomatology is not known. Once the proper diagnosis has been made we can start thinking in terms of treatment.

The best preparations used to abort the headache of the migraine type are those which contain ergot or its derivatives.

A preparation on the drug market for aborting a typical migraine attack, which does not have to be injected is the Pentergot® insert. This is a rectal suppository which is composed of ergotamine tartrate, pentobarbital, caffeine, and hyoscyamine sulfate. The use of the combination of ergotamine and caffeine under the trade name of Cafergot® has proven to be effective. 2-, 3

Because of the nausea and vomiting which these patients have, it is often very difficult for these patients to keep an oral preparation in their stomach. Thus the rectal preparation was developed. Also the rate of absorption through the stomach inflamed by vomiting is much slower than through a normal stomach mucosa. If the suppository is used in the early phase of the migraine attack, it is therapeutically successful in about eighty percent of the patients in which it is used. This preparation also comes in tablet form, which is not as successful a preparation.

It seems that the greatest success of all of these ergot preparations depends a lot on their early administration. If they are given after the headache has a good start, they are not nearly as successful. This is something which the patient should be warned about.

We know that the rectal suppositories have proven to be successful in aborting a typical migraine attack.^{1,2} These suppositories all have some type of base such as carbo-wax or cocoa butter. These substances have to be partially or totally dissolved before the drugs

within them can produce their effect on the headache attack from which the patient is suffering. This mechanism takes an average of thirty to forty-five minutes. This means that the patient cannot expect to obtain relief from his headache until this amount of time has elapsed.

For this reason, a new method of administering this drug to the migraine patient was devised. This is called a "Rectalad." It is a small soft, pliable, plastic tube with a small, two-inch nozzle type of applicator at the end. This applicator is fitted with a small plastic, T-shaped cork. In the plastic tube, in liquid form is the combination of drugs used to abort the migraine attack.

The patient is instructed to remove the T-shaped plastic cork. Then the small nozzle-like applicator is inserted into the rectum in the same manner as an enema tube. Some patients will desire to use liquid petrolatum when they insert the applicator, while others will not

Having inserted the applicator, the patient is then instructed to squeeze the small plastic tube containing the medication. In this manner he is actually giving himself a small enema.

The plastic tube only contains 1.0cc of the solution so the entire process will take only a matter of seconds.

The thought behind this new mode of administration is that the drugs are already in solution so they do not have to wait for the wax or cocoa butter base to disolve in order to become effective. In other words, the drug combination should be ready for absorption almost immediately through the rectal mucosa.

Another advantage which this type of applicator has over the suppository form is that this medication is already in liquid form and contained within a plastic tube. It therefore does not have to be safeguarded against melting, as the suppositories will readily do because of the soft base.

Several different types of Rectalads were investigated. However they all contained ergotamine tartrate and caffeine, as the combination

TABLE 1 RESULTS WITH VARIOUS TYPES OF RECTALADS

RELIEF RELIEF RELIEF CRAMPS LAXATIVE	
RECTALAD #1 Ergotamine tartrate 2.0 Mgms. 36 7 17 10 min. 14 2	4
Caffeine 100.0 Mgms.	,
RECTALAD #2	
Ergotamine tartrate 2.0 Mgms.	
Caffeine 100.0 Mgms. 38 7 15 10 min. 8 0	0
Scopolamine Aminoxide 0.4 Mgms.	
RECTALAD #3	
Ergotamine tartrate 2.0 Mgms.	
Caffeine 100,0 Mgms.	
Scopolamine Aminoxide 0.4 Mgms. 48 8 4 10 min. 7 0	0
Chloral Hydrate 200.0 Mgms.	
RECTALAD #4	
Ergotamine tartrate 2.0 Mgms.	
Caffeine 25 Mgms.	
Scopolamine Aminoxide 0.4 Mgms. 20 2 2 10 min. 1 0	0
Chloral Hydrate 200.0 Mgms.	

of these two drugs has proven to be successful in aborting migraine attacks before. 2.0 mgms. of ergotamine tartrate, and 100.0 mgms. of caffeine were in each type of Rectalad, except #4 which only contained 25.0 mgms. of caffeine.

In two types of Rectalads, a sedative was added to combat the tension element of migraine. The sedative chosen for this purpose was chloral hydrate, 200.0 mgms. was used. This was used in Rectalad #3 and #4.

Chloral hydrate is a chlorinated derivative of ethyl alcohol which is employed principally as a sedative and a soporific. It has little or no effect upon the blood pressure, respiration or the heart. It is absorbed readily from the gastrointestinal tract and is eliminated by the urine. It is contraindicated in persons suffering from renal or hepatic impairment, severe cardiac disease, or gastritis. It is an hypnotic with a very unpleasant taste but well tolerated rectally.

In three of the other Rectalads, scopolamine aminoxide was added. This is a central depressant. It is employed here to reduce any spasticity present in the gastrointestinal tract and also to reduce any excessive motor activity of the intestines. 0.4 mg of this drug was used in the Rectalad. The fact that ergotamine tartrate may produce, or increase gastro-intestinal symptoms, led to the use of such drugs as scopolamine aminoxide. It is the hope of the investigator that this type of drug will either completely eliminate or drastically reduce this side effect of ergotamine tartrate. It was used in Rectalads #2, #3, and #4.

The investigative work reported in this paper was all done on a blind procedure. The Rectalads were all supplied with different code numbers, and after having been tested on a sufficient number of patients the results were tabulated. When this was completed the code numbers were identified.

Table 1 shows the results obtained with various types of Rectalads.

The results in table 1 shows that Rectalads #3 and #4 were by far the superior of the four. Rectalad® #4 was superior in regards to side effects. So from this it is evident that the addition of the sedative (chloral hydrate) and the gastrointestinal depressant (scopolamine aminoxide) was of great advantage.

When scopolamine aminoxide was added to Rectalads #2, #3 and #4, the side effects of a gastrointestinal nature were greatly reduced. Most of these side effects were of a severe cramping nature. This seemed to occur within ten to fifteen minutes after the use of the Rectalad and in some instances even more quickly. In a small number of these patients who experienced cramping, the patient even stated that the Rectalad acted as a laxative. The laxative side effects were not noted when the scopolamine aminoxide was added. This was considered proof enough that the addition of this drug was a useful addition to the combination of drugs present in Rectalad #1. When the amount of caffeine was reduced to 25 mgms. as in #4, the gastric side effects were further reduced. Perhaps too much caffeine irritates the intestinal mucosa.

As I stated earlier, a great percentage of patients suffering from migraine have a considerable amount of tension present in their background. If this tension is present it must also be eliminated. For this reason the chloral hydrate was added to Rectalad #3 and #4. The efficiency of Rectalad #3 and #4 proved to be far greater than either #1 or #2.

From the results obtained it seems that the

combination of all four drugs produced the best results so far as aborting the migraine attacks is concerned. This combination also produced less side effects. The reduction in the amount of caffeine also reduced the side effects and still did not reduce the efficiency of the Migraine-Rectalad in so far as relieving the headache was concerned.

The big advantage of the Migraine-Rectalad over the other suppositories was that most of these patients received almost immediate relief from their headache attacks. Many required only five minutes for aborting the attack and some required fifteen minutes. The average time required however, for this mixture to start to show its effect in relieving the headache of the migraine attack was found to be about ten minutes. This is much faster than other types of medications (suppositories or oral preparations) which have proven to be successful in the past. This is a distinct advantage of this mixture.

Migraine-Rectalads® soon to be distributed on the drug market, should prove to be a definite aid to the physician and to the patient in aborting a typical attack of migraine headache.

3720 Washington Boulevard

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WHAT'S THE DOCTOR'S NAME

Identify this famous physician from clues in the brief biography. PAGE 89a.

A Sex-Linked Neurosis ... STUTTERING

JOHN LANZKRON, M.D. Beacon, New York

Conforming with the modern, psychoanalytically-oriented approach to nervous disorders, the authors of recent papers about stuttering are going out of their way to find a variety of psychic traumata in childhood with a resulting faulty mental mechanism responsible for this "spasmodic laloneurosis." "These same recurrent, emotional traumatic experiences threaten him at an age when he is still unable to organize enough forces to restore personality integration."

It is often overlooked that only a very small percentage of the children who are "subjected to disturbed parental and environmental influences"1 are prone to develop stuttering or other spasmodic diseases in childhood. "In the last analysis, such codified explanations of maladjustment as the currently rather popular one, ascribing almost every known variety of psychopathology to maternal imperfection during the child's early life, merely serve to affirm some basic biologic truisms. No one has ever denied that a person must have a mother, and must pass through infancy, in order to have any earthly chance of demonstrating geneticallycontrolled variations in his capacity for physical adaptation, emotional stability and social adjustment."3

Let us now read what Freud² himself has to say about the etiology of neuroses: "I think we can effect a presentation of the probably very complicated aetiological conditions which exist in the pathology of the neuroses, if we establish the following aetiological concepts: a) *Predisposition* b) *Specific*

Cause c) Contributory Cause and, as a term not equivalent to the former d) Exciting or Releasing Cause. In order to satisfy all possibilities let us assume that we are dealing with aetiological factors capable of quantitative alterations and consequently of increase or decrease."

After having explained the specific and contributory causes, Freud comes to a very important recognition of predisposition: "If I go into this aetiological formula for the anxiety neurosis in greater detail, I can add the following remarks: Whether a special personal disposition (which need not necessarily be ascribed to heredity) is unconditionally required in anxiety-neurosis or whether every normal person can develop that neurosis if there should be a quantitative increase of the specific factor, I am not able to decide with certainty, but I incline strongly to the latter view. Hereditary disposition is the most important determinant of anxiety neurosis, but not an indispensable one, since it is lacking in a series of borderline cases."

When comparing Freud's clear conceptions of the causes of neurosis with the confusing jargon of some Freudians, one is surprised how much importance Freud ascribed to the predisposition. He surely would not have hesitated to assign primordial importance to predisposition in a form of neurosis with such an obvious predisposition such as stuttering, or better,

Dr. Lanzkron is Assistant Director of the Matteawan State Hospital, Beacon, New York.

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"spasmodic laloneurosis." This neurosis has one characteristic which makes it outstanding among all other forms of neurosis. It happens to occur almost exclusively in adult males and not in adult females. With some extremely rare exceptions, women do not stutter. In my report,5 a Professor Panconcelli-Calcia (Director of the Phonetic Institute in Hamburg) made a survey of three hundred stuttering adults whom he had treated for twenty-five years in France and Germany. He found a ratio men: women=297:3. There was only one woman in one hundred stuttering adults. In these women the stuttering was worse, he stated, then in any male he has ever seen. But there is something even more interesting to this sex-predisposition. Among children, the ratio of stuttering boys to stuttering girls is 4:1, as I have published in 1931 in a statistical survey in Hamburg's schools.5 This has been confirmed by many authors. During puberty, about the time when the school girl has her first menstrual period, (a large territory to cover for further psychological speculations) stuttering disappears and for an unknown factor, the stuttering girl becomes a non-stuttering female. Although many specialists in "mental healing" cite cases where their treatment has helped these unfortunate girls to overcome their speech difficulties, without their treatment it would have disappeared anyway, as this has been observed and reported as a curiosity long, long ago. I do not think that, even with extraordinary dexterity in intellectual gymnastics, anyone could explain the phenomenon of a sex-linked neurosis by psychological factors alone. There is no reason to believe that girls are less exposed or susceptible to environmental stresses and strains in childhood than boys. The purely psychological interpretation also fails to explain why stuttering, allegedly due to inadequate resolution of intrapsychic conflicts, spontaneously subsides at the onset of womanhood, a period in life which the analysts themselves emphasize as adding psychic stress. Nadolescny⁶ states that stuttering is caused by a similar or dissimilar, inherited neurosis. Only in fifteen percent, he continues, was Troemner unable to trace this hereditary factor. The other patients showed stuttering or other outstanding neurotic features in comparatively high number in their ancestral lines.

Conclusion

- 1. The ratio of stuttering boys to girls (a nearly constant, 4:1);
- 2. The quasi non-existence of stuttering in adult females, and
- 3. The familial tendency of stuttering recognized but not explained even by the most psychoanalytically-oriented authors make it probable that there is a specific genetic, sexlinked emotional vulnerability in males which may release through contributory causes,

the unharmonious action between the muscles of respiration, vocalization and articulation causing the phenomenon we call stuttering. There also exists a predisposition of the male sex to other functional-spasmodic diseases in childhood such as pylorospasm and laryngospasm. A genetic factor, i.e., hereditary predisposition seems the major determinant in these functional-spasmodic disorders in childhood.

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THE PUBLISHERS

Megakaryocytic Leukemia

Case Report

L. G., Female, Age 63
Presentation: Dr. J. Buttafuoco
Discussion: Dr. H. Lichtman

DR. PERRIN H. LONG (CHAIR-MAN): The first patient to be presented today will be Mrs. L. G., who has megakaryocytic leukemia. The case-record will be presented by Dr. J. Buttafuoco.

Dr. J. BUTTAFUOCO: Mrs. L. G., is a 63year-old housewife who came to Kings County Hospital because of bleeding from her nose and gums of several weeks duration. She was first hospitalized in August 1956, at Long Island College Hospital because of interscapular pain which she had had two and one-half years, intermittent nausea and vomiting for one year, and anorexia, weakness and fatigue, and a ten pound weight loss of a few months duration. Clinical studies done there showed a healed duodenal ulcer, a non-hemolytic anemia requiring several blood transfusions, and a platelet count of 225,000. The bone marrow was reported as showing megakaryocytic hyperplasia.

On physical examination in Long Island College Hospital she was noted to have a large spleen. After two weeks she was discharged from the hospital, and then, while at home, she became progressively more uncomfortable and at the end of September 1956, she was readmitted to Long Island College Hospital,

and at that time it was decided to do a splenectomy. This was done and on histological examination of the spleen a marked reticuloendothelial hyperplasia was noted. At this time, the patient began to have very painful, red, tender fingertips and palms. She was also developing hard, tender, non-inflammatory nodules in her arms and legs.

After operation and while in the hospital she developed thrombophlebitis and a pulmonary infarct. She did not improve and was discharged from the hospital, and went down to live with her son in Florida while she recuperated. About two days after her arrival in Florida, she noted that her sclerae and skin were yellow and went to see a physician who advised hospitalization. She was hospitalized in Miami for nine weeks. Shortly after arrival in the hospital, she also began to vomit, and besides her other symptoms, she began to vomit blood and to pass black stools. After many blood transfusions, it was decided to do an exploratory laparotomy. At the time of operation it was noted that the patient had a scarred duodenum and that the liver was enlarged. No other abnormality of the abdomen was noted. A subtotal gastrectomy was performed and a wedge shaped biopsy of the liver was taken. A diagnosis of homologous serum hepatitis was made on the basis of the blood studies and on the biopsy material. Postoperatively she de-

From the State University of New York, Downstate Medical Center, and the Kings County Hospital, Center, Brooklyn, New York.

veloped a wound abscess which required two months to heal.

In all of her hospitalizations, the patient received thirty-eight blood transfusions and the white count was always noted to be always between 14,000 and 17,000. She had had occasionally an eosinophilia up to seven per cent. Her platelets were reported as normal. She had a number electrophoretic studies of her serum proteins but these were always reported as being normal.

On Mother's Day, in May 1957, she awakened with an enlarged, swollen, tender left knee. This responded over a period of two weeks to two injections of Meticortelone® into the joint. By the end of May 1957, she returned to New York and in June 1957, she had studies of her serum made for the macro globulins. These were normal. On testing her blood for hemoglobin content, it was noted that when the test was done with tenth normal sodium bicarbonate the blood would always clump. The patient had many negative preparations for the diagnosis of lupus erythematosus. In the weeks just prior to admission, she began to develop nose bleeds which often amounted to a cupful, and then bleeding from the gums began, which was also rather extensive. Examinations by a dentist and an otolaryngologist have not brought to light lesions which account for the bleeding.

On her admission to this hospital, the pertinent findings were that she was a well-developed woman, who was well nourished, alert, pleasant and who was in no distress. She had no purpuric spots on her skin and no petechiae. The liver was enlarged seven centimeters below the right costal margin and was not tender. There was redness and slight tenderness of the tip of the left index finger.

Her hemoglobin was 11.8. Her white blood cell count was 20,000 with a normal differential count, and many platelets were present in clumps and also singly. The "buffy" coat measured six millimeters. Her urine was normal as was her stool. Bone marrow studies made shortly after she came in, showed a fantastic increase in platelets together with

large numbers of odd looking megakaryocytes. The red blood cell precursors were normal. The white blood cell precursors showed abnormal forms.

The patient was started on 6-mercaptopurine approximately ten days ago, 50 mgms. three times a day. She has continued to have oozing of blood from her throat, none from her nose. Two days ago she developed a hard, tender nodule on her right forearm which was approximately 2 cms. in diameter, was not associated with redness of the skin and was markedly tender; since, it appeared suddenly and has gotten gradually smaller and less tender.

DR. LONG: Thank you. Dr. Kydd will you continue the discussion of this patient.

DR. KYDD: I think we better let Dr. Lichtman take over.

DR. LICHTMAN: Although Mrs. G. suffers from an extremely uncommon malady, signs and symptoms of her disease are so striking, that a diagnosis comes quickly to the mind of anyone who has seen a patient with, or read about a case of the syndrome of idiopathic thrombocythemia. Hemorrhagic thrombocythemia and megakaryocytic leukemia are other names for this proliferative disorder of the megakaryocytes of the bone marrow. This produces an extreme peripheral thrombocytosis.

Patients having this syndrome usually show excessive bleeding, chiefly during, or following, minor surgical procedures. Spontaneous bleeding from the nose or pharynx, the gastrointestinal tract, or the genito-urinary tract may occur as well. Characteristic too, is the association of thrombotic episodes which may involve the more usual deep veins of the lower extremities, and cerebral vessels, but also in reported instances* such unusual sites as the dorsal pedis artery, or the corpora cavernosa with resulting priapism. The demonstration of thrombocytosis is of course vital in the establishment of this diagnosis. This can be very easily seen on a properly stained and spread

^{*} Haemorrhagic Thrombocythaemia: A clinical and laboratory study. R. M. Hardisty and H. M. Wolff, British Journal of Haematology, 1:390-405, 1955.

peripheral blood film. This point deserves emphasis because this is probably most often neglected during the blood examination as routinely performed. During the performance of a differential leukocyte count platelets should, as a matter of routine be examined specifically, and reported upon in respect to their relative number and morphologic characteristics. In this patient the platelets were enormously increased. Upon review of the bone marrow aspiration performed at the Long Island College Hospital prior to splenectomy there, it is perfectly obvious that she had as many platelets then, as she has now, and therefore we cannot ascribe her thrombocytosis to the operation, i.e., post splenectomy thrombocythemia.

Apparently the thrombocytosis was never appreciated before this admission, and as a result her odd clinical picture could not be readily explained by one mechanism, as we feel it can now. Bits of megakaryocytes may also be seen in the peripheral blood films. These may appear to the inexperienced as large bare nuclei of unusual types sitting in nests of adherent platelets.

A mild anemia may be present. When it is marked it is usually associated with chronic blood loss and is therefore hypochromic, microcytic in type. In rare instances polycythemia has been seen. The leukocytes, as were found in this patient, and described in the reported cases are usually increased in numbers but are not necessarily immature as in leukemia. The counts range from 20,000 to 30,000 per cubic millimeter. The differential count is relatively normal with some increase in band forms and an occasional myelocyte is found. Our patient has an increase in basophiles, eosinophiles, and monocytes.

Our patient had a duodenal ulcer. It is of interest that duodenal ulcers were present in six of the twenty-eight case reports of this syndrome which I have reviewed from the literature.

The clinical course of patients who have this disease is usually slowly progressive with death often occurring as a result of thrombotic occlusions of cerebral vessels or an episode of massive hemorrhage of the gastrointestinal tract. Cerebral thrombosis, venous and arterial thrombosis of the extremities, priapism, pulmonary infarctions, and epistaxis have all been found to occur frequently in this disease.

The paradox of the coexistence of hemorrhagic and thrombotic tendencies is not easily explained. In one report which appeared recently in the British Journal of Haematology, studies were performed on the blood of five patients with this disorder. The authors demonstrated a qualitative defect in the function of the platelets in these patients, although they were present in great numbers. Using the thromboplastin generation test, the platelets were found to be deficient for producing the optimal evolution of thromboplastin. Of the simpler tests of hemostatic function, the bleeding time is frequently found to be abnormal. This was the case in reports of fourteen of twenty-three patients so tested.

In another recent report, in vitro testing indicated that platelet function in the elaboration of thromboplastin was abnormal only when large number of platelets were used. Dilution of the platelets to more physiological quantities was associated with a return of normal function. This work suggests that an anti-thromboplastic factor may be present in platelets which can become important only when the concentration of platelets is too high.

The thromboses are more easily explained, perhaps naively. We assume that large masses of platelets may adhere to small vessel walls especially in the capillary beds where blood flow is sluggish and may mechanically plug these vessels and thereby induce infarction. Perhaps because of increased quantities of vasospastic substances such as serotonin which are carried by platelets, vessels might also be contracted further, reducing the flow of blood and thereby increasing thrombotic tendencies.

In this patient, we were able to demonstrate a greatly increased whole blood viscosity as measured in a silicone-coated glass viscosimeter. The blood of normal individuals with a similar volume of packed red cells but with normal numbers of platelets flowed much more rapidly. The buffy coat as measured in a Wintrobe hematocrit tube was found to be 8 mms. in height and was due almost completely to the greatly increased numbers of platelets.

We are told, that previously, the patient had normal platelet counts. I suspect these reports to be inaccurate. This is understandable to anyone who is familiar with the technical difficulties associated with the enumeration of platelets. They are very sticky particles and in addition to losses involved because of their adherence to glass pipettes and cover slips, they have a tendency in this patient especially, to form large clumps which have made accurate enumeration almost impossible in our hands. When more platelets could be seen on Wrightstained cover slip preparations than erythrocytes, we were certain that reports of 200,000 per cubic milliliter were grossly erroneous.

For the past three years we have been caring for another patient with this syndrome, a thirty-four-year-old male. At present he is quite well. Originally his major problem was recurrent peripheral phlebothrombosis. We learned by trial and error with this man, that measures which lowered his platelet count, were effective in eliminating his thrombotic tendency. With him we have had most success with the use of 6-mercaptopurine. During the period of observation we have been able to start and stop therapy several times and have noticed a good correlation between the thrombocytosis and phlebothrombosis.

I would suggest that we do the same with this patient i.e., treat her with 6-mercaptopurine at a dose level of 150 mgms. per day until her platelet count falls and then by testing establish a maintenance dose which will give her a safe number of platelets. If this is ineffective we could then try other agents such as Myleran®, radioactive sodium phosphate (P³²) or triethylene melamine.

The cause of this disease is unknown. It is classified by some with the myeloproliferative disorders related perhaps to polycythemia vera, chronic myelocytic leukemia, agnogenic myeloid metaplasia, or erythroleukemia. There are some who feel that the thrombocytosis or megakaryocytic proliferation is simply a stage in the development of a more widespread proliferative disease such as myelocytic leukemia.

The prognosis is quite variable. It seems to be a more benign disorder than leukemia, in general. The average survival of reported cases was about six years. In twenty-three of the case records reviewed, thirteen patients were still alive at the time of the reports. Seven of these were known to have the disease more than five years. One patient was alive after twenty-eight years.

Our patient has been on therapy now with 6-mercaptopurine for only ten days. It is still too soon to know of her eventual sensitivity to this drug since 6-mercaptopurine of all of the compounds we use in the treatment of proliferative diseases is the slowest in demonstrating its therapeutic effect. We will have to wait at least six weeks before we can tell whether this drug is effective or not.

DR. Long: Thank you Dr. Lichtman. Are there any questions about this extraordinary patient? I guess there are none, because Dr. Lichtman covered the ground so thoroughly.



Clinical Pathological Conference

NATIONAL JEWISH HOSPITAL, Denver, Colorado

Case 13113: A 48-year-old Spanish-American Male, was admitted to the National Jewish Hospital on November 18, 1957. Past History: No previous illness. Occupational History: A blacksmith and mechanic.

Present Illness: In March 1957, the patient developed a respiratory infection with a cough, but in spite of this he continued to work. Although he was treated at home with medications unknown to us, he continued to lose weight. During the summer, he developed persistent hoarseness. In September, he contulted a physician who recommended some "cough medicine." Two weeks prior to the National Jewish Hospital admission, he was hospitalized in his home community where a presumptive diagnosis of pulmonary tuberculosis was made. The patient at the time was troubled with severe pain in the distal portions of both lower extremities. Four days prior to transfer to National Jewish Hospital he expectorated some blood.

Physical Examination

Patient was a marasmic, weak, somewhat cyanotic Spanish-American male who was raising blood-tinged sputum. Temperature on admission: 99.2°F; respiration: 18 per minute; pulse: 132 per minute; blood pressure: 130/90 mmHg.

There was a clearly demarcated bluish area

involving the toes of the left foot. Numerous petechiae were observed over the body. An absence of the lunate areas of the fingernails was observed. An indurated, painful swelling was noted on the dorsum of the left hand. There was evidence of poor oral hygiene, and an ulcerated area was noted in the right buccal mucosa. No respiratory motion was observed in the inferior portion of the right chest. A decrease in the intensity of the vocal fremitus and the breath sounds in the right chest was noted.

Cavernous breath sounds were heard in the right apex. There were no significant cardiac or abdominal findings.

Laboratory

X-rays of the chest: To be discussed later. Hemoglobin: 7.9 gm %. White count: 10,-000. Differential: 92% Polys; 8% Lymphocytes. Hematocrit: 25%. Sedimentation rate: 68 mm per hour. Clotting time: 8 minutes, 4 seconds. Platelets: very numerous. Urine: Specific gravity, 1.014; reaction, pH 5; sugar, negative; albumin, ++; acetone, negative.

Microscopic examination revealed pus cells, granular casts 2/hpf, rbc's 75/hpf. Fasting blood sugar: 56 mg %. Protein: 5.5 gm %. Albumin: 2.5 gm %. Globulin: 3.8 gm %. Cholesterol: 95 mg %. Stools for occult blood: negative. Culture of sputum for common pathogens revealed a predominance of

hemolytic staphyloccoccus aureus coagulase positive, few neisseria, rare alpha streptococci.

Hospital Course

At no time during the course of hospitalization did his fever rise over 101°F. Skin tests with tuberculin, histoplasmin, blastomycin, and coccidioidin were reported as being negative. Six blood cultures were obtained prior to death. A culture of the sputum for fungi revealed none. A culture of the stool revealed E. coli only. On the day of admission, treatment was started with aqueous penicillin, 500,000 units intramuscularly every four hours. He was also treated with the following anti-tuberculous medication: PAS, 10 gms a day, streptomycin, 1 gm a day, INH, 700 mg or 16 mg/kg daily, and pyridoxine, 100 mg a day.

The patient refused to permit us to do a left paravertebral block or a bone marrow biopsy. During the latter part of his hospitalization, he had to be restrained in order that the therapy could be continued. The penicillin was continued until November 21, at which time he was placed upon Erythromycin, 2 gm and chloromycetin, 2 gm daily. The antituberculous therapy was continued as described. At the time of his death on the fourth hospital day, the patient had a general increase in the number of petechiae present, and the spleen was palpable. Exodus was the result of a massive pulmonary hemorrhage.

Discussion

DR. IRVING KASS, Assistant Medical Director, Chief of Medicine, National Jewish Hospital at Denver, and Assistant Clinical Professor of Medicine, University of Colorado School of Medicine: This interesting case will be discussed by Dr. Jorge B. Martinez, Chief Resident on the Non-Tuberculous Chest Service.

DR. MARTINEZ: Before proceeding with my analysis of the protocol, I would like to ask Dr. Morris Levine (Radiologist at National Jewish Hospital) to review the x-rays.

DR. LEVINE: An x-ray of the chest taken on November 19, 1957 revealed the heart and great vessels to be within normal limits. There was a large cavity in the right lower chest. Marked exudative reaction was present in the left mid-zone, and in the pectoral segment of the right upper lobe. There appeared to be a cavity close to the right cardiophrenic angle (Figure 1). A film taken on November 21, 1957 showed a marked extension of the process in both lung fields, particularly in the right upper lobe and toward the left apex (Figure 2). The last film taken on November 22, 1957 showed a further increase in the process in both lungs so that almost the entire lung field on both sides showed involvement (Figure 3).

The rapidity of spread indicated that an acute fulminating inflammatory process could be present. Fungus infection as well as multiple bilateral vascular occlusions by emboli also merit consideration.

Negative Test

DR. MARTINEZ: At the time of admission to National Jewish Hospital, the referring physician felt that this person was suffering from tuberculosis. It was my feeling that the patient probably did not have active pulmonary tuberculosis because of the negative skin test. Unless there was an associated condition which gave rise to skin anergy, such an overwhelming sepsis, Hodgkin's disease, sarcoidosis, agammaglobulinemia, a negative tuberculin skin reaction suggests that the person never had or does not now have a tuberculous infection.

The strength of the tuberculin skin test used was 1:1000 (phenol soluble fraction of old tuberculin equivalent to 10 T.U.). We do not use greater concentration of O.T. for skin testing because the absence of response to 1:1000 O.T. usually rules out typical tuberculous infection.

At our institution the presence of non-specific skin anergy is determined by injecting codeine intracutaneously. One-half grain of codeine is dissolved in 30 cc of water, and 0.1 ml of this solution is injected intracutaneously. If the skin is not anergic, a wheal will appear



FIGURE I Chest x-ray taken on the day of admission.



FIGURE 2 X-ray taken two days later shows an extension of the process.

within ten to fifteen minutes at the injection site. Unfortunately, this test was not performed on this patient.

Having ruled out tuberculosis as a likely diagnosis, the question then arose as to what other disease entities should be considered. Fungus disease can certainly mimic tuberculous infection, and definite cavitation is not uncommon in cases of chronic histoplasmosis and coccidioidomycosis. The absence of fungi in the sputum as well as a negative skin test for histoplasmosis, coccidioidomycosis, and blastomycosis tend to exclude these conditions. Although the significance of a negative skin test in fungus infection is not as well documented as in tuberculous involvement, it is my feeling that the skin test findings have about the same significance in both entities.

Certain "collagen diseases," particularly periarteritis nodosa, have been described as giving this clinical picture. The increased red cell sedimentation rate, reversal of the A/G ratio might be consistent with this diagnosis. However, the lack of any eosinophilia, hypertension, and a fairly normal white count tend to negate this diagnosis.

Pathogens

Tucked away in the protocol are the following statements: A culture of the sputum for common pathogens revealed a predominance of hemolytic staphylococcus aureus, coagulase positive, few neisseria, and rare alpha streptococci. A culture of the stool revealed only E. Coli and the blood cultures prior to the patients death showed no growth.

Is the large number of staphylococci in the sputum of any significance? I feel that an affirmative answer is indicated. Although the organisms commonly encountered in the lower respiratory tract in health and disease are alpha-hemolytic streptococci, neisseria, and sometimes a few staphylococci, it is rare for one to find a predominance of coagulase positive, hemolytic staphylococcus aureus in the sputum without attaching some significance to their presence. The coagulase activity suggests that they are pathogenic organisms.

The case history was that frequently observed in pulmonary staphylococcus. The patient developed a respiratory infection, followed by a cough. He did not respond to therapy and began to lose weight. Usually



FIGURE 3 Final x-ray shows an almost complete involvement of both lung fields.

the onset of a staphylococcic pneumonia is associated with bronchitis, influenza, malnutrition, diabetes, or asthma. If the pneumonic episode is not rapidly fatal, then a chronic course with remittent fever, abscess, and sometimes empyema follows. Statistically, abscess formation is most apt to occur in staphylococcic, and Friedlander's pneumonia.

A disturbed sensorium ranging from mild confusion and disorientation to episodes of psychosis is frequently observed and was observed in this case. It is far more common to obtain positive blood cultures if the lung lesions are secondary to bacterial spread from another site. Underlying diseases associated with micrococcal bacteremia are: carbuncle; furuncle; cellulitis; leukemia or lymphoma; pyelonephritis; lupus erythematosus; osteomyelitis; multiple sclerosis; metastatic carcinoma; diabetes mellitus; dermatitis herpetiformis; pemphigus; puerperal sepsis; periarteritis nodosa; suppurative plyephlebitis; aplastic anemia; multiple myeloma; chronic ulcerative colitis; erythroblastosis fetalis; fibrocystic disease; infantile diarrhea; exfoliative dermatitis, and urethral obstruction.

The negative stool and blood cultures in this case suggested that the infection was primarily in the lung and ruled out in part the need to conduct a vigorous search for or discussion of a primary source of infection in another organ.

It is difficult to explain some of the vascular findings except that as the organism multiplies locally it produces coagulase and toxins. Presumably, the coagulase diffuses into the surrounding tissues and accounts for the local vascular thrombosis. Abscesses and eventual excavation with cavitary formation can be attributed to the toxins.

Asphyxia

Death in this case probably was similar to that observed in cavitary pulmonary tuberculosis. Most likely an aneurysmal dialatation of a vessel in the cavity wall ruptured and the patient died of asphyxia.

There is one other clinical finding worthy of comment. The patient had no nail moons. If one is not too bold, could these findings postulate some pituitary disturbance? The fingers, particularly in a hypopituitary status or state have been described as tapered and the nail moons, except for the thumb are lost.

In summary, I feel that this patient did not

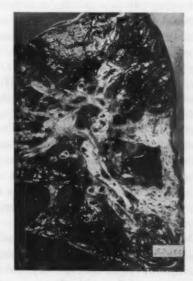
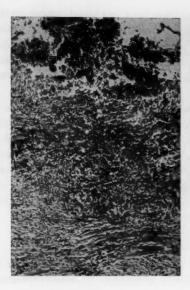


FIGURE 4 Lung.



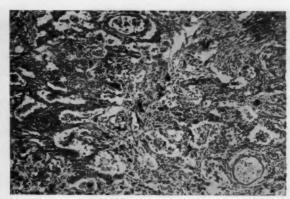


FIGURE 5 (Left) Wall of abscess showing fibrosis and exudate in lumen (X60). FIGURE 6 (Above) Chronic pneumonia about the abscess showing organized exudate and giant cells (X65).

have pulmonary tuberculosis, but that he did have multiple lung abscesses of staphylococcic origin, and that he died as the immediate result of asphyxia secondary to a massive hemorrhage.

DR. DENST, Pathologist, National Jewish Hospital, Associate Professor of Pathology, University of Colorado School of Medicine: The body was that of a rather wasted Spanish-American man, five feet, eight inches in height and weighing 101 pounds. Petechial hemorrhages were present on the right leg and under the nail of the right ring finger. The anterior portion of the left foot was discolored blue.

The right lung weighed 1370 gm. The interlobar fissures were obliterated by fibrous adhesions, and the pleura of the posterior aspects of the lower lobe was thickened, gray, and adhesion-covered. The apex of the lower lobe was occupied by a cavity which measured $6 \times 6 \times 5$ cm and broadly communicated with the (apical) segmental bronchus. The cavitary lumen contained a little thin bloody fluid and soft red clot, but only a trace of purulent fluid coated the lining (Figure 4).

A broad zone of firm, yellow-gray parenchyma surrounded the cavity. The lining of the cavity was rough, firm, and dry, blending without demarcation with the surrounding pneumonic consolidation. The principal arterial branches were probed into the wall of the cavity, where they appeared to be obliterated. Three similar, but smaller, satellite abscesses measuring from one cm to 3.5 x 3 x 2 cm were seen, the largest being in the anterior segment of the upper lobe.

Microscopically

The left lung weighed 1310 gm, and exhibited some apical pleural adhesions. There was a 1 cm, partly excavated yellowish consolidation in the apical segment. The parenchyma elsewhere was severely congested.

The abscesses contained a thin zone of purulent exudate in which Gram-positive cocci were observed. The wall consisted of granulation tissue and rather dense fibrous connective tissue (Figure 5). The parenchyma was no longer discernible, and there was a marked interstitial fibrous thickening with infiltrations of lymphocytes, plasma cells, and occasional fields with multinucleated giant cells (Figure 6). In many places, the alveoli were distended with fibrin, polymorphs, and mononuclear cells in varying proportions.

Small patches of coagulation necrosis were present. A careful search of sections stained by the Ziehl-Neelsen stain and periodic acid-

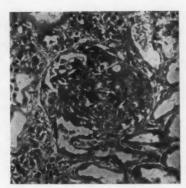
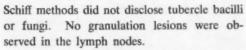


FIGURE 7 Severely damaged renal glomerulus (X140).



The kidneys, together, weighed 275 gm, and grossly they appeared to be normal. Scattered glomeruli, however, exhibited one or more necrotic, capillary loops, with or without adherence to the capsules. A rare glomerulus (Figure 7) was completely necrotic. The majority of the glomeruli were normal with a few lymphocytes and plasma cells limited to the stroma about the altered glomeruli. Special stains did not reveal microorganisms. The proximal conculted tubule possessed flattened epithelium.

Another interesting microscopic feature was the presence of rather heavy, patchy, and perivascular infiltrations of lymphocytes and plasma cells in the posterior lobe and intermediate lobe of the pituitary gland.

Anatomic Diagnoses

The heart weighed 265 gm, and was not remarkable. An acute ulcer was present in the glottis. The gangrene remained unexplained. The principal anatomic diagnoses were:

- Abscess, lung, multiple, staphylococcical.
 - · Hemorrhage, from pulmonary abscess.
 - · Ulcer, glottis, acute.
 - Nephritis, glomerular, focal embolic type.
- Inflammation, chronic, posterior lobe of pituitary gland.

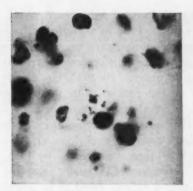


FIGURE 8 Organisms in abscess. Gram-picric stain (X800).

• Gangrene, foot, cause undetermined.

Dr. Kass: Was the pulmonary abscess primary?

DR. DENST: Evidence of a previous cutaneous infection or aspiration was absent in the
history, and bacterial endocarditis or other
possible primary sources of bacteria were not
found at the autopsy. The abscesses appeared
to be a sequel of a chronic pneumonic reaction. In some areas the parenchymal exudate
appeared to be more recent with a larger
fibrous component. Bacteria were not found
in tissue sections except in the thin pyogenic
membrane of the cavity. The chemotherapy
probably was effective, at least to some extent,
in the eradication or suppression of the bacterial proliferation in the tissues and in promoting the walling-off of the cavities.

Bacteremia

The hypophysitis and renal glomerular lesions indicated that a bacteremia had been present. One may speculate, that without antimicrobial therapy, hematogenous renal abscesses would have developed. Of course, it is impossible to say that the organisms in the cavity were staphylococci solely on the basis of their morphology (Figure 8), but excretion of large number of staphylococci in the sputum, absence of other organisms in the tissue, and negative skin tests for tuberculosis and fungi, substantiate this conclusion.

RESIDENT: Would you discuss the treatment

of a staphylococcal pneumonia?

DR. Kass: Prior to the advent of penicillin, the overall mortality rate accepted by most investigators for micrococcal bacteremia was about 75 percent. By 1945, less than 30 percent of the patients with staphylococcemia died. Clinical experience in the years following 1948 revealed that the mortality in hospitalized cases of staphylococcal sepsis had risen to 50 percent or higher. By 1955, more than 70 percent of all strains recovered from hospitalized patients failed to be inhibited by penicillin *in vitro*.

As the other antibiotics have been introduced, resistance to their use has also increased. For example, in 1956 more than 50 percent of the staphylococcal strains recovered from human infections were markedly resistant to both erythromycin and the tetracyclines.

Drug susceptibility and mouse pathogenicity tests were performed on the staphylococci isolated from this patient's sputum. Dr. Middlebrook, would you like to discuss the results of these laboratory tests?

DR. MIDDLEBROOK, Director of Research and Laboratories, National Jewish Hospital, Associate Professor of Microbiology, University of Colorado Medical School: The coagulase positive staphylococci isolated from the sputum of this patient proved to be highly susceptible to all the common antimicrobial agents, including the penicillin and erythromycin that were used in treatment. It is routine practice in our clinical bacteriology laboratory to perform penicillin susceptibility tests on staphylococci, first by the filter paper disc technique on solid agar plates. Then, if penicillin susceptibility is clearly evident by this technique using the one unit disc, a high degree of penicillin susceptibility is assumed.

Strain

However, if penicillin resistance is indicated by the 10 unit paper disc method, it is not necessarily assumed that the strain might not be affected by high dosage, intensive penicillin treatment—of the order of 5 to 20 million units per day—until a tube dilution penicillin susceptibility test has been performed with an inoculum of not more than 10⁵ bacterial cells per ml of medium. Inasmuch as penicillin resistance of staphylococci is almost invariably attributable in practice to penicillinase production, and inasmuch as penicillinase is adaptively produced, we believe it is often possible to effect a definite chemotherapeutic response by initial administration of large doses of penicillin, even in the face of a laboratory report of penicillin resistance when large inocula are employed in the test procedures.

Unfortunately, this approach does not work well under circumstances which usually prevail in a general hospital: the patient usually comes into the hospital already under treatment with doses of pencillin which are entirely ineffective, only having induced penicillinase production. At our institution, however, the administration of penicillin can be more readily controlled; it is uncommon practice to initiate penicillin treatment without careful preliminary laboratory tests.

In this case we were treating a highly susceptible strain of staphylococci, and I think it is fair to assume that the staphylococcus infection per se (not necessarily the pathologic response which had already been given to the subacute staphylococcus) was controlled before the patient's death. Indeed, I believe Dr. Denst's histopathologic studies bear this out. I have been wondering whether or not there is any relationship in this case between the fatal pulmonary hemorrhage and staphylococcal fibrinolysin production, the action of which would not be interrupted by effective antimicrobial therapy. This strain produced fibrinolysin and it was normally pathogenic for the mice on introperitoneal inoculation.

Agents

DR. Kass: The clinician now has the following antimicrobial agents to inhibit the growth of micrococcus pyogenes var. aureas and albus: penicillin, chloramphenicol, erythromycin, novobiocin, streptomycin, tetracyclines, vancomycin, and ristocetin. An encouraging note, in vitro at least, is that resistance to the last two drugs develops rather "slowly."²

When strains of micrococcus, freshly isolated, are inhibited by 1 mcg or about 1.6 units of penicillin per milliliter, then sustained use of penicillin alone will most likely control the bacteremia.

When penicillin is not used it would be best to use effective dosages of two or more anti-biotics with in vitro studies indicating that they possess effective antistaphylococcal activity. For example, chloramphenicol, although not highly active against staphylococcus, has a remarkable inhibiting effect on the selection of erythromycin-resistant staphylococci during exposure of such organisms to the combination in vitro. Although not clearly proved, it is reasonable to assume that the same action occurs in vivo.³

Patients Treated

This situation may be analogous to the prevention of the selection of drug-resistant populations of *M. tuberculosis* whenever adequate dosage of two drugs such as INH and streptomycin are used.⁴ For the past four years, we,

at National Jewish Hospital, have treated 175 patients initially excreting Mycobacterium tuberculosis susceptible to 2.0 mcg/ml of streptomycin and 0.2 mcg/ml of INH with INH 8 to 16 mg/kg/day and streptomycin 20 mg/kg/day. The streptomycin was given intramuscularly daily for 90 days or more until the sputum became negative.

In only three instances did we fail to convert the sputum to negativity with this combination and only in these cases did the organisms become resistant to the drugs used before the sputum converted to negativity. It remains to be seen if these principles can be successfully applied to the treatment of other infections.

Finally, the SchenLabs Pharmaceuticals, Inc. introduced a penicillinase (Neutrapen) which can be used in the treatment of penicillin reaction.⁵ Following this advance, it will be interesting to see if an antimetabolite of penicillinase can be synthesized, thus permitting us to treat with penicillin and this antimetabolite those bacteria resistant to penicillin by virtue of their endogenously produced penicillinase.

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Cutaneous Abscesses

Although the age of antibiotics has considerably reduced infections in general, cutaneous abscesses are still seen frequently in everyday practice. The majority of these abcesses are the result of infection of the skin and its appendages by pyogenic cocci. However, a small percentage of them are less common conditions such as actinomycocis, sporotrichosis, tuberculosis, hydradenitis suppurativa, anthrax and tularemia. The proper diagnosis is of paramount importance in order that specific therapy can be instituted. Any abscess that does not respond to conventional therapy should be investigated in regard to the less common infectious agents.

Certain predisposing factors make some people particularly susceptible to abscesses and infections in general. It is well known that diabetes makes one more prone to infections. Therefore, barring local causative factors, anyone who has repeated attacks of boils and other abscesses, should have a urinalysis, blood sugar determination and even a glucose tolerance test to discover incipient diabetes. Besides diabetes other conditions (anemia, malnutrition, blood dyscrasias and certain endocrine dysfunctions, etc.) are predisposing causes.

Local factors, however, are usually much more important. A great number of sebaceous cysts which are left untreated sooner or later become infected and develop into abscesses. Irritating factors contribute to the production of furuncles and abscesses. Examples are friction and strong irritants in areas of apocrine

and sweat gland distribution such as the axillae and groins. A frequent location for abscesses in men is the nape of the neck as a result of friction from shirt collars. Severe cystic acne can produce abscesses by confluence of lesions and deep destruction of tissue. A severe type of rosacea, seen especially in middle aged patients, will often lead to a condition known as pyoderma faciale. In this condition numerous boggy abscesses are seen on a background of erythema and telangiectases. Workers handling cutting oils often develop furuncles on the hairy positions of the body. In the tropics, people who are unaccustomed to the intense heat develop pustular syringitis (abscesses of the ducts of sweat glands). This condition is not uncommonly seen in children during the summer, and is characterized by large pustular lesions scattered over the body but especially prominent on the forehead.

The proper treatment of an abscess that has become fluctuant is incision and evacuation of the purulent contents. Unless the abscess is very large there is today little need to insert a drain. Wet compresses with systemic antibiotics will usually produce resolution in a few days.

If the patient is seen before the lesion has become fluctuant, systemic antibiotics and local compresses will often abort a frank abscess.

An abscess located in the anterior and lateral cervical regions should immediately bring to mind the possibility of actinomycosis and tuberculosis colliquativa (scrofuloderma). In both instances, incision of the abscess leads to

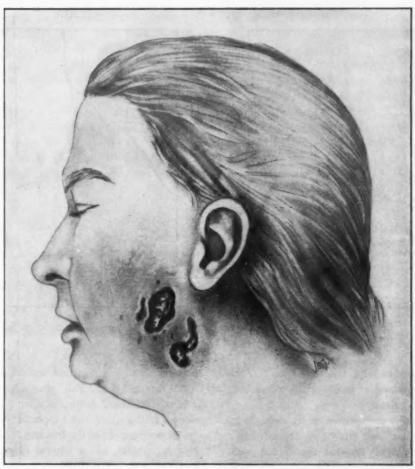


FIGURE 1. Actinomycosis of face, with sinus formation.

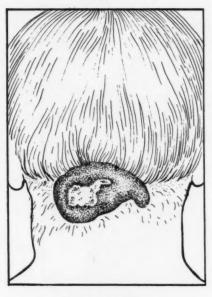
a chronically discharging sinus with subsequent scar formation.

Actinomycis bovis is an ubiquitous fungus. Cutaneous cervicofacial actinomycosis is the most prevalent variety of infection due to this organism. Saprophytic actinomycis bovis is present in the tonsillar crypts and decayed teeth. Lumpy jaw (cervicofacial actinomycosis) often follows the extraction of a badly decayed molar. In the submental or upper cervical region there appears a swelling which becomes fluctuant over a period of several weeks. The course is slow as compared to a pyogenic abscess. There is minimal pain, heat or tenderness. The skin overlying the lesion becomes purple, and if untreated, ruptures and

drains spontaneously. A sinus tract forms and new satellite nodules and abscesses develop. Some healing also takes place with fibrosis, producing a hard irregular fibrotic mass.

The clinical picture is a typical one and the correct diagnosis can usually be made from it. However the identification of the ray fungus in the abscess confirms the diagnosis. The fungus is usually present in the granules which are extruded from the sinus and become readily attached to a piece of gauze placed over the wound. A small biopsy specimen taken from the granulation tissue and stained with the Hotchkiss-McManus stain will also reveal the presence of the organism.

Actinomycosis can be effectively treated to-



Carbuncle of neck.



Multiple active sinuses of axillae.

day by means of large systemic doses of penicillin, oral potassium iodide solution and local roentgen ray therapy.

Tuberculosis colliquativa in its early stages gives a picture very similar to actinomycosis. It presents a slowly growing painless red swelling which softens, becomes fluctuant and finally breaks open. If seen in the first few weeks it may be misdiagnosed and mistreated as an ordinary pyogenic abscess. It occurs in young adults and adolescents. A common location is the lateral cervical region. The cause is an underlying tuberculous lymphadenitis. The tubercle bacillus can sometimes be isolated by stain from the purulent exudate, but this is not always the rule. Culture is much more accurate, but time consuming. As such, the diagnosis is sometime hard to make. The treatment of choice is streptomycin and isoniazide in addition to bed rest and general supportive measures.

Sporotrichosis often presents as an abscess. The causitive organism grows on plants, and the disease is common on the forearms and hands of gardeners. A few weeks after a super-

ficial scratch or a puncture wound, a nodule forms in the skin. This gradually becomes soft and fluctuant. Several similar nodular lesions develop along the lymphatic vessels on the internal aspect of the forearm. The picture is quite typical and a clinical diagnosis can easily be made. The diagnosis is confirmed by the identification of the causative fungus (Sporotrichum schenkii) in the pus by means of culture on Sabouraud's agar. Oral potassium iodide is the treatment of choice.

Hydradenitis suppurativa is another condition which starts as axillary abscesses. The disease is most common in young adult males. Its most common site is the axillae, but all areas bearing apocrine glands, namely the perineum, nipples, groins and umbilicus are also affected. The typical history is that of recurrent torpid abscesses which heal slowly leaving behind cord-like scarring. It is a chronic disease often lasting 20 years or more producing great discomfort and disability. Even in the early stages of an acute axillary abscess, the diagnosis can be made by noticing prominent large black comedones and circular 5 x 5 mm.

skin pitting in the involved areas. When the abscess is drained, thick cheesy material is released and a probe can be passed into large tortuous canals. Hydradenitis is often allied with severe cystic acne which produces multiple small abscesses on the face, back and chest. The immediate treatment of the absesses is incision and drainage and antibiotic therapy.

Small doses of antibiotics administered over a prolonged period will in many cases cure the disease. If this fails, radical surgical excision of the area followed by skin grafting is the most effective therapy.

A pararectal abscess is sometimes the result of a chronic fistula-in-ano. Excision of the fistula after incision and drainage of the abscess will prevent recurrence. Finally, anthrax and tularemia are often begun as cutaneous abscesses which present several days before the full blown systemic picture of the disease becomes manifest.

Summary

Although the age of antibiotics has considerably reduced infections in general, cutaneous abscesses are still seen frequently in everyday practice. The majority are the result of infection of the skin and its appendages by pyogenic cocci. However, a significant percentage are the result of less common condi-

tions, such as actinomycosis, sporotrichosis, tuberculosis, hydradenitis suppurativa, anthrax and tularemia. The proper diagnosis is of paramount importance in order that specific therapy can be instituted. Any abscess that does not respond to conventional therapy should be thoroughly investigated bacteriologically.



CHRONIC ALLERGIC RHINITIS

- 1. Parabromdylamine (maleate), 4 mg., chlorprophenpyridamine (maleate), 4 mg., and tripelennamine (hydrochloride), 50 mg., were found to give closely comparable relief of symptoms in chronic allergic rhinitis.
- 2. The incidence of side effects with parabromdylamine was slightly less than with chlorprophenpyridamine and one-half as great as with tripelennamine.
- 3. Three antihistaminic compounds, AHR 209, AHR 211, and AHR 224B in 4 mg. doses were much less effective in relieving symptoms of chronic allergic rhinitis but showed correspondingly low incidence of side effects.

WALTER R. MACLAREN The Journal of Allergy (1959), Vol. 30, No. 3, P. 239.

EDITORIALS

PERRIN H. LONG, M.D.



TAKING STOCK

Recently, your Editor sat down and took stock relative to the papers which had been published in MEDICAL TIMES, since the beginning of his stewardship as Editor more than two years ago. The following table shows the distribution of published papers by subject since September 1957:

- 52 CARDIO-VASCULAR-RENAL DISEASE
- 48 PRIMARILY THERAPEUTICS
- 45 PSYCHIATRY AND PSYCHOSOMATIC MEDICINE
- 34 DERMATOLOGY AND ALLERGY
- 26 GASTROENTEROLOGY
- 25 OPHTHALMOLOGY-OTOLARYNGOLOGY
- 21 SOCIAL, ECONOMIC AND PHILOSOPHICAL
- 21 MISCELLANEOUS
- 21 INFECTIOUS PROCESSES
- 18 OBSTETRICS AND GYNECOLOGY
- 16 ORTHOPEDICS
- 14 SURGERY
- 11 NEOPLASIA
- 11 DISEASES OF THE BLOOD
- 11 ALCOHOL AND ACCIDENTS
- 10 DISEASES OF COLLAGEN
- 10 GENITO-URINARY AND VENEREAL DISEASE
- 9 HEADACHE
- 8 RADIATION AND X-RAY
- 7 PULMONARY DISEASE
- 7 ANESTHESIA
- 7 NEUROLOGY
- 6 PEDIATRICS
- 4 PUBLIC HEALTH

A glance at the table indicates that with possibly two exceptions, the distribution of subjects is essentially what one would expect in a journal which prides itself on being the publication for the family physician. The two possible exceptions are first, the relatively large number of papers on psychiatric and psychosomatic medical subjects which have appeared, while the other had to do with the fair number of papers on social, economic and philosophical problems as such affect the practice of medicine, or the physician. Both of these exceptions do reflect the Editor's point of view. It is his belief that many of the illnesses seen by family physicians have a neurotic element and that this should be well-rounded in his knowledge of what's going on around him and what it may mean to him and to medicine in general.

The fact that papers on Cardio-vascular-renal disease head the list is easily understood, as is also the fact that subjects which were primarily therapeutic in context were in second place. After all, about four hundred new drug preparations are now marketed each year. The remainder of the list is about what one would expect as far as distribution of subjects is concerned.

Your Editor hopes that a distribution of the type of papers shown in the table is one which is helpful to our readers. We would appreciate very much any comment, criticisms, or suggestions made by our readers. They will receive very careful attention, so if you have any, please let me know.

Parin H. Long,



examination was carried out as indicated in this picture? Your Editor doesn't. He has conferred with a number of aged doctors like himself, and none can remember anything like this nor are they quite sure of what is going on. One of the more imaginative of

the Editor's colleagues suggests that the electrode on the head is producing waves in the brain, and that percussion is being done to demonstrate visceral effects of this stimulation. This seems a bit odd. If any reader has an idea about what is going on, please drop me a line.

Photo: United Press International













THE LONG AND SHORT OF IT

From Your Editor's Travels and Reading

ORAL ANTIDIABETIC THERAPY

"Oral therapy for diabetes is a worthy objective, provided it appropriately controls the metabolic alterations of diabetes. The advantages must outweigh the disadvantages.

Three sulfonylureas have offered promise: tolbutamide, chlorpropamide and metahexamide. They presumably lower the blood sugar by stimulating increased insulin secretion and by decreasing hepatic glucogenesis, particularly in the presence of insulin. They seem to have their greatest effect in patients who most nearly approach normality in the amount of assayable insulin in the plasma and pancreas; these tend to be elderly individuals with stable diabetes of recent onset. A poor response is apt to be obtained in depancreatized patients, or in diabetes that is unstable or of long duration, or requires large insulin doses, or is prone to produce keto-acidosis. There is no evidence that sulfonylurea treatment causes β cell exhaustion; indeed, there is more to suggest the contrary. Side-effects with tolbutamide have been few and mild. Chlorpropamide and metahexamide have caused side reactions more frequently, and occasionally have produced jaundice of the cholestatic type, usually reversed upon cessation of treatment. Metahexamide has caused jaundice with sufficient frequency to preclude its further use in this country.

Metahexamide and chlorpropamide are more potent than tolbutamide, but thus far this seems to have advantage in only a small proportion of patients.

Phenethylbiguanide inhibits certain oxidative

enzymes of the Krebs' cycle, particularly succinic dehydrogenase and cytochrome oxidase. This produces: (a) an increase in anaerobic glycolysis with an increase in glucose uptake, and (b) a decrease in gluconeogenesis, decreased liver glycogen and decreased hepatic glucogenesis. As a result, glucose disappearance from the blood increases and its entrance from the liver decreases, both factors contributing to hypoglycemia. This biguanide may lower the blood sugar in all types of diabetics, but the greatest effect is observed in the mild, stable type. Combined with insulin, it produces smoother control in unstable diabetics. In some subjects, chiefly of the stable type, better control is obtained with the biguanide plus a sulfonylurea than with either drug alone. The high incidence of side-effects, even though rapidly reversible, has significantly limited the extent of usage of phenethylbiguanide.

Tolbutamide, chlorpropamide and phenethylbiguanide, all have value in the treatment of some diabetics. Moreover, many additional orally effective compounds will be provided. They must be evaluated objectively, noting their effects not only on the levels of glucose in the blood and urine but also upon many phases of the metabolism of carbohydrates, fats and proteins, as well as their effect on general health with prolonged usage."

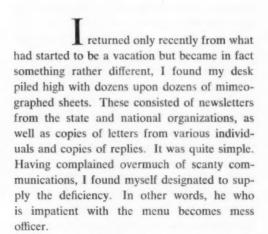
> ROBERT H. WILLIAMS, M.D., F.A.C.P., RICHARD H. POLLEN, M.D. and ROBERT H. BARNES, M.D. Annals of Internal Medicine (1959) Vol. 51, No. 6, pp. 1121-1133.

A NEWS LETTER

What is an Internist?

ROBERT J. NEEDLES, M.D.

Saint Petersburg, Florida



It required most of an afternoon to read the material with which I had been furnished. About halfway through the task, I realized that my work resembled that of a music lover who has but one record. No matter how poignant the refrain, or skilled the performer, significance of the thematic content diminished with repetition. I was left with what might seem to be a rather absurd impression. This is not a conclusion, being more an impression, beaten into me by that one-track, narrow gauge line to resurgent confusion with which we are so familiar. You see, from this mass of newsletters and correspondence there seemed to have emerged but two major issues. These are the same two issues which have plagued us, in

Florida, since our beginnings. They existed before our society (of internal medicine) was formed, and they have occupied much of our discussion time. They continue to plague us, and now, as I saw, the refrain has become national, and returns again.

In working over these two well-beaten dilemmas, it is not my hope to dispel their murkiness. On the other hand, what else is there to discuss? Note how familiar the refrain: one: what is an internist? two: what are the services of an internist worth? The answer to the second, of course, depends upon the answer to the first. And discuss them I so intend, for those who delegated me the task of composing a newsletter neglected to attach any disqualifying reservations.

What is an internist? The very idea of expecting a simple explanation for so complicated a problem is an invitation to failure. The answer depends, first, upon whose description is accepted. And, since none of those descriptions are without prejudice, we can only conclude that we are somewhat of a mystery to those about us. Surgeons are not sure, although many of them seem to believe that we are rather peculiar fellows. They understand that we do no surgery, that we are reluctant to scrub, and observe their admirable skills, and

they have finally come to understand that we admit little affection for the administration of anesthetics. General practitioners are not quite so indefinite, asserting that we are at once overshy, over-trained, and over-confident of our skills. Of course, to ourselves we are delightful fellows, not improbably because we see things rather from the same level. That level is presently not entirely pleasing to us, nor is it one where we may be expected to remain either complacent or agreeable.

So let us return to a more basic area for our discussion. Richard Weaver remarked that, in seeking definitions, it is of first importance that we adhere to genera, and avoid concentrating upon individual types or specimens. In other words, one could, with some decency, compose the definition of a human being. But how could one define George Washington, or, to pick a contrast, Harry Truman? Internists, then, may be defined. One internist is, in fact, indefinable, for we participate in the variety which is the essence of human individuality. To believe that each member of an entire specialty group can be compressed into some neat and succinct definition is to ignore those very differences we ourselves cherish. It is to avoid reality, and accept, without struggle, a dreamy and irresponsible egalitarianism. But internists, more than any other specialty group, deny the possibility of categorization of men in lumps, like lard or pudding. If these things be true. our first requirement is that we stick to genera, and agree to no breaking-down, for local, personal or other reasons, the well-defined and defensible concept of internal medicine. An internist can only be, by definition, one of that group of specialists who practice internal medicine and who is, by his achievement of that status, an internist. Not good enough, of course, and so on we go, rather as if we were blind men, searching in a darkened room for a black cat gone elsewhere.

The price of honesty (Lincoln is quoted as saying), is to stick to argument from definition, and allow no multiple sub-classifications. And, above all, to reach agreement, or to defend ourselves in any argument from definition, we

are warned to stay out of the excluded middle. In other words: have a clear definition of ourselves as a group, stick to it, and allow no fractionating. Above all, we must never wander near the middle of the road, for there lies a more savage destruction. Near the middle of the road there will be many types of doctors, but few genuine internists. Others we have, in startling numbers when subjected to analysis. In fact, I examined the yellow section of our telephone directory. Here, as you know, each doctor is allowed to nominate himself for greater glory in the profession. He chooses what he shall be called, and unless it do shattering violence to all truth and history, he is allowed to persist in his little vanity. So I found (these are my own figures, and I do not defend them as absolute) that in St. Petersburg we have the following:

- 27 General practitioners (some of whom admit also to another skill, such as obstetrics).
- 41 General practitioners, who fail my definition of internist and also fail the definition of an internist established by the Florida Society of Internal Medicine. In the directory, however, they are described, by themselves, as "internists," or "limited" to internal medicine, or to "general medicine," or some such.
- 30 Internists, veritable internists, by my own or any other definition.
- 6 Internists, who are internists by my own affection or definition. They have not, however, as yet secured official documentation of their skills.

So, where are we? We are, first of all, outnumbered. Nonetheless, if we are come this far only to count heads, we might as well enliven our labor by breaking a few heads. Quality must interest us more than mere numbers. In our profession, votes are not only counted, they are weighed. We have thirty, perhaps thirty-six individuals in a proper classification of internists. Forty-one doctors are pleased to identify themselves with us, although we have not invited them. Twenty-seven call themselves general practitioners, and that they are. Of course, you may say, this is St. Petersburg, and St. Petersburg is unique. I agree, although not perhaps for the same reasons as yourselves, not necessarily. But if you will study your own telephone directories, it is possible you will find a similar pattern in your own town. And, if this is true, picture yourselves sitting down, some fine month, or year, to classify and estimate the professional qualifications of the doctors in your own community. Each of you would be able to come up with some sort of stratification, each of you would accept some cross-matching. There would remain an excluded middle, some with one sponsor, some with no advocate save himself. Of course, one general practitioner may prove to be quite a formidable protagonist in behalf of his own prerogatives. Nothing short of your demand for proof of what he so proudly claims will slow him down. This will be humiliating to you and insulting to him, and you may very possibly have made thereby an enemy for life. Is it not likely, therefore, that instead of this proper choice, you will fall to trading votes, and conceding? Is it not possible that you will end with a non-homogeneous mixture, evil and unblended? Is it not possible also that you will be well on your way to assisting in the destruction of your state society and also the parent body?

Internal medicine has been well recognized. though with agreeable modesty not insistently so, for many generations. All doctors were, at one time, physicians. When surgeons were still barbers, and even more recently when they were yet called "mister," we were physicians. We have surrendered many of our prerogatives. and have allowed others to assume authority in narrow specialties once a part of our domain. The parts, it appears, have reunited outside our central body. They proceed to the direction of parent, children, and ordering of their accumulated privileges. Osler was an internist, was he not? And Henry Christian? And Francis Peabody? And James B. Herrick? All these splendid gentlemen who taught us Theory and Practice—these were internists, were they not? The American College of Physicians began to decide, in the twenties, which doctors could rightfully be called "internists." The American

Board of Internal Medicine began a sharper classification in the early thirties. Why deliberate we so solemnly, once and superfluously again, on how better to select those already selected by others? It is quite simple, this business of deciding who is an internist. It has already been done for us. It has been done by those who strained toward "Those Board Examinations" and "That College," and made it. These decisions have been made, with the cooperation of those who so desire it, by a succession of honorable physicians, on Committees of the College, in Boards of Internal Medicine. These qualifying authorities are yet in existence, yet are available, and are still better than any substitute we could possibly hope to establish, on a local or state level.

It is on this local level where pressures from friends, families and the community at large will work to vitiate impartial choice. Others will be impatient, and that impatience will not be allowed to settle by the eager applicant. Others will understand but poorly a rejection which seems to have been made for no reason (apparent to them) except the personal bias and prejudice of those doctors also resident in that community, who refuse recognition. A national standard, whether of the Board or College, is not a barrier to admission to our society. It is, instead, defense against those about us who will use reasons, arguments or even threats unless there be a larger requirement. Reliance on demonstrated, provable qualifications will spare us timid acquiesence, and also protect us from retaliation, for we also are ruled by law, not men. So let us have done with this part of the difficulty, in any event. An internist, eligible to our state organization, has been defined as one who has exposed himself to a proper course of training. He is not only eligible for the Board or College. He has taken, and passed his examinations. He holds unimpeachable Certification or College Fellowship. Of course, not all those who are so accredited are accepted, for on local levels character is of importance. There are exceptions, however, you will say. Of course there are. There are exceptions, largely self determined, as your exception in another direction was self determined. This is a scattered few, and regardless of how virtuous they may be, they remain non-portfolioed, and their failure to achieve definable and defensible status as internists must not be allowed to dilute the quality which we have determined to be proper. Our concept, never seriously questioned, includes stated training, authentic and completed certification, and recommendation from those who can recommend his personal qualities. By holding to this standard we need admit to no false conceit. Nor should we be ashamed of what we have, at no small labor, achieved. It is not our desire to hold others back. If others

conceive of themselves as victims of a narrow prejudice, there is a good method of correcting this situation. It is that route that we took, and to which they are recommended, and which is still open to him. Meanwhile, let us be about our business, which is that of internal medicine. It is not helpful to spend our time placating a few unhappy spirits, who are, after all, physicians, doctors of medicine, and not degraded by any unless by themselves.

Summary—Now you may say, "This is no newsletter!" True. Does anyone have anything new to talk about?

615 Eleventh Street North



THE DIURETIC EFFECTS OF HYDROCHLOROTHIAZIDE

"Hydrochlorothiazide, a derivative of chlorothiazide, was tested for its diuretic effectiveness in patients with congestive heart failure, cirrhosis, chronic renal disease and hypertension. It was found to be a potent oral diuretic particularly in patients with congestive heart failure. It was of limited value in patients with cirrhosis and renal disease. Chloride was excreted in considerable amounts with sodium and potassium in varying proportions. The most important untoward effect was the development of hypopotassemia secondary to increased potassium excretion. This was particularly marked in patients with liver disease. It was our impression that hydrochlorothiazide was comparable to chlorothiazide in diuretic effectiveness."

MARVIN A. SACKNER, M.D., ARMAND A. WALLACK, M.D.,
AND SAMUEL BELLET, M.D.

The Am. J. of the Med Sciences (1959)
Vol. 237, No. 5 No. 1045, Pp. 76, 584.

When You— Meet the Press



To promote a greater and smoother flow of accurate medical news from the medical profession and hospitals, a number of state medical groups have prepared guide booklets on media relations. Here's one such guide, designed to assist physicians, county societies and local hospitals cooperate with the media of public information in the community.

Within the framework of this guide, county medical societies and local hospitals may wish to adjust certain provisions to facilitate cooperation with the media of public information in their own communities. It is with this understanding in mind, that the following considerations are given.

PHYSICIANS

or designated spokesmen of the medical society in the State of New York shall be available at all times to the press, radio and television in order that authentic information on medical subjects can be obtained as promptly as possible. The Department of Communications of the Medical Society of the State of New York is available to representatives of all media of public information to assist them in any way possible. Medical societies shall urge all doctors who become aware of new developments in the field of medical science to make such

facts available for public information, through proper officials of their county or state medical society.

2. Editorial executives of newspapers, radio and television stations, and magazine editors and writers frequently find it necessary to obtain information for dissemination to their readers or listeners. To facilitate obtaining of such information, the medical societies may furnish them with a list of physicians from whom authoritative information may be obtained. Every effort should be made to supply the names of physicians qualified to speak in their respective fields.

3. These spokesmen may be quoted by name and title. This should not be considered by their colleagues as seeking self-publicity,

This article is reprinted from a booklet prepared and published by the Medical Society of the State of New York. It is designed to assist members in their relations with representatives of the various media of public information. The section on hospitals was prepared and approved by the Hospital Association of the State of New York and the Greater New York Hospital Association.

The primary responsibility of the doctor and the hospital is the welfare of the patient. Yet, it must be recognized that the media of public information exist for the common good, bringing matters of general interest to the public quickly and correctly.

since it is done in the best interests of the public and the profession.

- 4. Doctors of medicine, other than officially designated spokesmen, when approached by representatives of newspapers, radio and television, and science or magazine writers for information relating to scientific subjects are urged to comply with such requests. In cases where premature release of scientific information is a concern, a frank discussion of the problem is suggested between the doctor and the press representative.
- 5. Publications of photographs of speakers who appear before recognized medical organizations, either in the official program of the scientific meeting or in the public press in connection with such meeting, shall be acceptable. The use of photographs in the press when physicians are elected to office or when physicians are quoted by name on matters of general interest, not related to the care of a specific patient, is likewise acceptable. Photographs of physicians in general or society news, not related to medical news or the care of patients, shall be acceptable unless the frequence of such photographs bespeaks self-exploitation. This applies also to magazine articles. Physicians should clear such publicity, whenever possible, with their county society.
- 6. At all times the doctor of medicine is expected to comply with the Principles of Professional Conduct. It shall be the responsibility of the Board of Censors of each county society to see that these principles are not violated.

- 7. Doctors of medicine are compelled to protect the inalienable rights of the personal privacy and legal rights of patients. The doctor-patient relationship with its confidential communications must be maintained. The physician must safeguard his own right of privacy to avoid legal retaliation. With these considerations in mind the physician should assist the representatives of these media in every way possible.
- specific patient is requested, the physician should obtain the consent of the patient before releasing such knowledge. The patient's decision is final under the law. A physician may encourage the patient or his family to state the cause of illness, or the cause of death, when this information is requested by a bona-fide representative of the press. Where a person of public interest is involved, the physician should arrange for regular bulletins concerning the personage. The ethical physician will use good judgment regarding the use of his name in connection with such published reports.
- 9. For purposes of clarity the medical society outlines the following principles to guide physicians who appear on TV or radio programs or in other media of public information, such as newspapers and magazines:
- Doctors of medicine are expected to refrain from sponsoring products directly or by implication that are not accepted by the medical profession: i.e., patent medicines.
- When introduced as a doctor on TV or radio programs, pictured in an advertisement or quoted in an article as a physician in newspapers and magazines, such individual cannot escape the implication of representing the medical profession and his conduct should be in keeping with the high standards of the profession.
- Sound judgment, good common sense and adherence to the Principles of Professional Conduct are expected of any physician when appearing on TV or radio programs, or in other media of public information, such as newspapers and magazines, in whatsoever capacity. It is the responsibility of the county

society Board of Censors to discipline its own members who violate these fundamental qualities.

HOSPITALS

- 1. General principles and procedure:
- Each hospital shall have available at all times an authorized spokesman to answer inqueries from public information media.
- The names of the designated persons, telephone numbers and hours when available, should be made known to the telephone operators, admitting departments, information desks, nursing supervisors, emergency departments and others who are likely to receive calls from newspapers or reporters.
- Similarly, the names, telephone numbers and hours when available of these spokesmen should be filed with the press, radio and television.
- Information shall be provided to news agencies as rapidly as possible without interfering with the health, privacy or legal rights of the patient or jeopardizing the hospitalpatient relationship.
- Information relative to the activities of the hospital should not be designed to secure comparative advantage over other hospitals or personal advancement of any individual.
- Information relative to research and scientific projects should not be made without the consent of the individual or individuals and the sponsoring agency involved nor in any manner to conflict with the ethics of the professional group concerned.
- 2. Information to be given to news agencies:
- Hospitals shall give the name of the attending doctor when so requested by the media unless such physician in advance requests that he not be identified.
- When newspapers request the photographing of a patient in the hospital, such permission shall be given in the discretion of the administration, if the patient consents and if the attending doctor decides the patient's condi-

- tion or interests will not be jeopardized. If the patient is a minor, permission of parents or guardian must be obtained unless the minor is "emancipated." If the minor is of sufficient maturity, his consent should also be secured. No pictures will be permitted of unconscious patients or patients suffering from severe facial injuries.
- The death of a patient is presumed to be a matter of public record, and shall be reported by the hospital without the diagnosis or cause of death.
- Hospitals may give information concerning births in accordance with local practice.
- The admission of a patient may be acknowledged and the general condition stated.
- Emergency cases. Hospital may give name, age, address, occupation, sex, nature of accident—such as automobile, explosion, shooting; general extent of injuries—such as injury to leg, arm, etc.; burns, wounds and part of body. A definite diagnosis or prognosis should not be expressed.
- In cases of poisoning, stabbing, attempted suicide or other similar occurrences, no motives or opinions of motives should be given. Attempted suicide should not be characterized as such.
- No statement should be made as to whether a patient is intoxicated.
- If a patient is unconscious when he is brought to the hospital, a statement of that fact may be made without indicating the cause of the unconsciousness.

PRESS, RADIO, TELEVISION

1. Representatives of the media of information recognize that the first obligation of the doctor and the hospital is to safeguard the life, health and legal rights of the patient. Conversely, the doctor should be aware of the existence of the "Canons of Journalism," and of television and radio codes under which all responsible members of such media function. Within the framework of this guide and the

medical profession's Code of Ethics, physicians are urged to be less reluctant to discuss problems with representatives from any branch of the media of public information.

2. It is desired that the media of information know that the medical profession and hospital associations prefer no publication, broadcast or telecast of information designed solely to exploit the patient, the hospital or the doctor.

- 3. When official medical society spokesmen are available, it is suggested that on medical news a check for local tie-in will be considered before proceeding to local broadcast, telecast or publication.
- **4.** It is desirable for representatives of the media of public information to understand why there are limitations placed upon the doctor of medicine and the hospital with regard to the release of information.

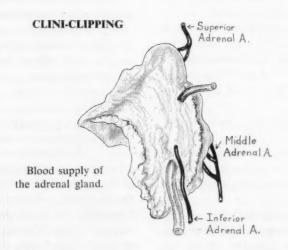
Acknowledgement

The fact that our guide has reached its third printing is one measure of its success in providing the framework for successful relations between representatives of the news media and physicians and hospitals. To Dr. John C. McClintock, past president of the Subcommittee on Cooperation with Media of Information, New York State Medical Society Committee on Public Relations; Dr. George A. Burgin, pres-

ent chairman of the subcommittee; Dr. John D. Naples, Dr. C. Stewart Wallace, and to all those who gave their time and effort to the development of the guide, our sincere thanks are gratefully expressed.

HENRY I. FINEBERG, M.D. President, Medical Society of the State of New York





A LEGACY OF LEADERSHIP

The Klines, father and son, sparked the growth of their company with energy and imagination. By introducing quality control, paving the way for pure food and drug legislation and fostering research, they left their imprint on the entire pharmaceutical industry.



MAHLON N. KLINE

On February 15, 1865, Mahlon N. Kline, a neatly scrubbed 19-year-old, joined the Philadelphia wholesale drug house of Smith & Shoemaker. That bleak, rainy day eventually became a historic one for the small firm at 243 North Third Street, as the new bookkeeper proved to be a unique employee.

The only son of a Berks County (Pennsylvania) farmer, Kline attended Philadelphia public schools and in 1865 graduated from Eastman Commercial College in Poughkeepsie, New York. When he joined Smith & Shoemaker that same year, the company president was George K. Smith.

It was Smith, who in 1841 during the early days of patent medicines, founded a one-man drugstore in the center of Philadelphia's business district. With quinine and crude drugs the only pharmaceuticals available to the medical profession, Smith built a good business by providing physicians throughout the country with reliable and prompt service. However, in 1861 he suffered a sizable financial setback when large turpentine commitments in the South were canceled upon the outbreak of the Civil War. With the financial support of such friends as George Y. Shoemaker, who bought into the firm in 1863, Smith survived the economic crisis, and by 1865, the company was in need of an energetic bookkeeper. Young Kline appeared quite capable of filling the position.

Kline was too keen and ambitious to restrict himself to bookkeeping. He applied himself to other activities of the firm and, within a few years, his efforts resulted







Company leaders (1 to r): Harry B. French; George Smith, who founded his Philadelphia drugstore in 1841, and Mahlon K. Smith, nephew of founder.

in the addition of a number of new and large accounts. His energy and talents recognized, Kline was made a partner in the firm in 1868. After the death of George Y. Shoemaker and George K. Smith, Kline and Smith's nephew changed the firm name to Smith Kline and Company.

Great Development

Under the dynamic Kline the business, with sales of little over \$100,000 in 1868, underwent phenomenal development. In 1878 the company moved to larger quarters, and by 1883 it had modified its wholesale-retail business by establishing a rudimentary pharmaceutical laboratory for the manufacture of several basic products. Three years later, when sales had climbed to over \$770,000, Kline added a small research laboratory to the company.

In the early 1890's another Philadelphia drug firm, French, Richards and Company, was absorbed and its president, Harry B. French, became vice president of Smith Kline & French Company. Hundreds of separate and varied products, including liniments, tonics, hair oil, cough medicine and numerous home remedies, comprised the product line of the expanded firm.

By the turn of the century perhaps the most notable innovation of the house was the filling of orders upon the same day they were received. Orders received by mail or telegraph in the morning were sent out in the afternoon. In this departure from the old and leisurely methods of order filling, Smith Kline & French became the pioneer among the wholesale drug houses of the country.

Under Kline's direction the company also instituted the procedure of having all drugs bought by the house passed upon for quality by laboratory chemists before they were put into stock, a practice which soon became universal after the enactment of the Federal Food and Drugs Act of 1906.

After the enactment of the Act, the chief government chemist praised Kline for his efforts in promoting such high inspection standards and said the country owed a great debt to Mr. Kline who "first helped in getting such a far-reaching and salutary act on the statutes, and second, in giving such valuable assistance in the preparatory work necessary to its enforcement."

By 1902 sales had climbed over the \$3 million mark and the company was likewise growing in number of employees, one of which was Kline's 22-year-old son, C. Mahlon Kline. The younger Kline, who started as an analytical laboratory worker, testifies to his father's buoyant energy during those years. "He was a hard man to keep up with—always on the go. looking for new things to do and better ways of doing everything."

While building a sound and reputable business, the elder Kline found time to distinguish himself in many other organizations and associations. He joined the National Wholesale Druggist Association in 1882, and in 1885 was made its president. For years Kline served as chairman of the Association's proprietary

committee and later as chairman of the important legislative committee.

Among his many other activities, he served as chairman of the board of the Philadelphia College of Pharmacy and as president of the Philadelphia Drug Exchange. He also helped found the Philadelphia Chamber of Commerce and served on numerous national affairs committees.

By 1909 he had crowded many memorable moments into his 63 years. A deeply religious man, he served as superintendent of a Sunday school, and president of the brotherhood of St. Andrew. On November 27, 1909, Mahlon N. Kline rushed to attend services in his neighborhood church. He died removing his coat.

Good Nature

An article that appeared in a Philadelphia newspaper cited his remarkable career. It read: "It will be wondered by those who did not know the man how he could accomplish so much without a physical and mental breakdown, and the answer to the query is that he was happily possessed of a perennial flow of good nature, which made the usual irritations of an extremely busy life leave but little effect upon his stalwart frame.

"Again, he was charitable of mind, as he was with his pocketbook, and he wasted no time in worrying over things that couldn't be mended, or in . . . malice or hard feelings against any man. That he was carrying too great a burden of mental labor is undoubtedly true."

Behind him Kline left a remarkable record. The company he had developed was sound, and the son he cherished possessed the attributes of leadership.

Upon his father's death C. Mahlon became the vice president of the company under Harry French. Through their efforts sales grew to over \$7 million by 1920. In 1921, when C. Mahlon Kline became president, the company was distributing about 15,000 products, many of which were over-the-counter remedies. In the next few years, Kline laid the groundwork and established the long-range plans which



C. Mahlon Kline developed plans for future growth.

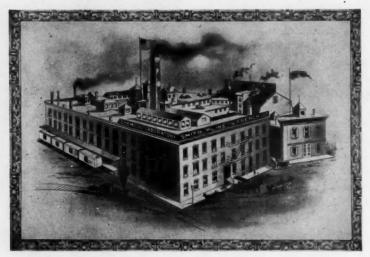
were to bring about his company's growth into one of the world's leading pharmaceutical manufacturers.

Among the first to recognize that research held the key to the future of his industry in the service of medicine, he was confronted by a situation both discouraging and promising. At that time the academic scientific world and commercial firms were still separated by a gaping chasm. Kline realized that the academic institutions had the highly skilled personnel necessary to carry on drug research but often lacked the financial means to pursue the search for new therapeutic agents.

His foresight led to a conviction that by supporting the work of scientists in various research centers he would be adding to medical knowledge and progress and, at the same time, intensifying the research efforts of his own firm. This policy, begun in the 20's when the entire SK&F research department consisted of two scientists, has been, and still is, an important factor in his company's operations. Hundreds of scientists working in academic institutions throughout this country and abroad have been the beneficiaries of this policy.

This research support program brought wide acclaim as exemplified by a grant given to an acquaintance of Dr. Alfred N. Richards in 1929. Upon transmittal of the grant to his friend, Richards remarked, "Certainly the liberality of the terms with which that grant was made and the spirit with which it was made gave me a changed idea of the attitude of industrial administrators to academic investigators."

Also in 1929, Kline directed his firm's re-



In 1898 the pharmaceutical firm bought a manufacturing plant on Delaware Avenue.

The company occupied building (left) in 1887, an office annex a few years later.



organization which resulted in complete separation of the wholesaling operations from the research and manufacturing aspects. Smith Kline & French Laboratories emerged as the parent research and manufacturing organization, while the wholesale activities were carried on by Smith Kline & French Incorporated.

Specialty Products

In the decade after this reorganization, Kline brought about a modification of the entire philosophy of the laboratories when the company began to concentrate its efforts in the research and manufacture of "specialty" products. Thus, in 1936, Smith Kline & French discontinued production and sale of virtually all of its general-line, over-the-counter products and began to emphasize research, development and marketing of "ethical" specialties—products advertised only to the medical profession and dispensed only by pharmacists at the direction of a physician.

Kline's confidence in his own scientists and administrators has given great impetus to the progress of the firm; and his willingness to provide his scientists with an environment approaching the "ivory tower"—so necessary for creative research — has contributed immensely to the company's successful record of recent years.

This confidence in his associates grows out of one of Kline's guiding rules: to select his associates carefully and then delegate considerable authority to them. This was brought out several years ago when Kline was a witness in a trademark lawsuit. Questioned about his associates' activities, he remarked: "I might say that the officers of my corporation are permitted to exercise their functions very independently. That's one of my boasts."

It has not only been in the field of research that Kline has contributed to the advancement of the industry. He recognized that its merchandising methods needed modernization. Perhaps his greatest contribution to progress in this field was to conceive the idea that pharmaceutical products should be introduced to the medical profession by sending samples

through the mail. In the early days of his career, product announcements to the medical profession were confined to literature sent through the mail and salesmen who called on doctors.

However, Kline held it to be essential that physicians in large numbers should have an immediate opportunity to evaluate a new drug by actual use. In the early 1920's he therefore directed his company to undertake the sending of actual samples of new products through the mail. Thus, his company established a pattern which still remains an unique aspect of the relationship between the medical profession and the pharmaceutical industry.

The Great Outdoors

Although Kline has devoted the major portion of his life to advancing medical science and the pharmaceutical industry, his private life has centered around outdoor activities. As an outdoor sportsman he started early, climbing Mt. Blanc in Switzerland at the age of fourteen. At that time he was the youngest to have reached its summit. Kline's love of horses is also well known, being an owner and racing thoroughbreds for many years.

His thoroughbred "Whaddon Chase" captured the Grand National and Brooke at Belmont in 1939, and his racing colors have been seen on many of the famous courses throughout the country. He rode his own mounts in hunt meets for many years, and was Master of Foxhounds at the Whitemarsh Valley Hunt Club.

Each winter he manages to visit his plantation in Georgia for some hunting, and in the summer goes to Scotland for grouse shooting. During a trip there several summers ago, his sister received a letter from him which stated: "I'm sorry I've been so long in writing . . ." This brought a spontaneous: "He should be. It is the first time he's written me in 30 years." But the rest of the letter was true to form: "The only reason I am writing you now is that it has been raining and there is no shooting. Am well."

Test of Courage

Kline is also a devoted air traveler despite a harrowing experience in 1929. Following a business visit to Avoset Company, an SK&F milk products subsidiary on the West Coast, he decided to fly back East, despite bad weather, in order to spend the Christmas holidays with his mother and two sisters.

Unfortunately, the plane was forced to land at Indianapolis because of a snow storm. As the plane came in it skidded along the icy runway and crashed. Kline was severely injured. It was through Kline's indomitable courage and strong will — plus the preliminary treatment which he received—that he survived.

Kline also is known by his associates to be a reticent man whose words are delivered with brevity and considerable wit. Informality also rules whenever Kline has to make a speech, whether it is to stockholders or an impressive audience of physicians. He possesses that great gift of putting men at ease. At a conference on aging, in 1949, he called the meeting of eminent physicians to order with these remarks:

"Since I have been finding it increasingly difficult at my age of 69 to be at work every-day by 9:15 A.M., I congratulate you and particularly myself for being here at 9:00 A.M. As a matter of fact, under this program of the 'Clinical Problems of Advancing Years,' I speak to you entirely as the problem and not in the least as one of the discussers of this very important subject. If you will examine my case, I will appreciate it very much, indeed, and send the bill to the company, if you please."

Among his many notable awards, Kline received an honorary doctor of science degree from the University of Pennsylvania in 1957 for his activities in promoting "as a shared enterprise" cooperative research between academic medicine and the pharmaceutical industry.

Contributions and Progress

The accomplishment of two generations of Klines is immeasurable. The foresight and leadership of both Mahlon N. and C. Mahlon have made substantial contributions to the progress of medicine and the development of the pharmaceutical industry.

Smith Kline & French Laboratories today stands as a monument to their lives. The head-quarters of the Philadelphia pharmaceutical firm is now located in a spacious, well equipped building approximately one-and-a-half miles from the site of George Smith's small apothecary shop. The company's 1958 sales of \$124 million were derived from a line of twenty-seven prescription products and sixteen over-the-counter products.

Today the extensive research activities of Smith Kline and French Laboratories testify to the prevailing influence of C. Mahlon Kline's philosophies. Over seven hundred and fifty of SK&F's employees are engaged in the firm's Research & Development Division where in 1959 alone the company spent over \$12 million.

Apart from the internal effects of this concentration on research, SK&F is active in considerable outside scientific inquiry. The company supports both basic and applied research projects in hospitals, medical schools and pure-research institutions through grants from the Laboratories and the Smith Kline & French Foundation. The Foundation was established in 1952 to administer grants for charitable, educational and scientific purposes.

In addition, SK&F research is carried on in a number of areas outside of the main company headquarters in Philadelphia. In 1958, SK&F announced the establishment of an independent research organization in Great Britain to supplement the firm's own extensive Research & Development Division in Philadelphia and — of equal importance — to provide the company with a direct link to European science.

At the age of 79, C. Mahlon Kline now serves as honorary chairman of the board. His business capabilities along with his wit and disarming simplicity have earned him the respect and admiration his father had attained. His life gives credence to the age old adage, "like father—like son."

National

Jewish Hospital

at Denver

This 325-bed hospital specializes in diseases of the chest and operates in accordance with its motto: "None may enter who can pay; none can pay who enter.

The National Jewish Hospital at Denver occupies an unusual place in American Medicine. Though it is Jewish sponsored, it admits all, regardless of race, creed or national orgin, and there is no charge for treatment. This has been the policy since the hospital's founding in 1899.

NJH admission policy specifies:

• The patient must be suffering from a chest disease in which the hospital specializes (tuberculous and nontuberculous chest disease, including emphysema, asthma, chronic bronchitis, malignancies, as well as cardiovascular

defects amenable to surgery).

 The patient must have a reasonable chance to improve with treatment.

 The patient must be unable to afford private care.

The hospital was founded at a time when thousands of tuberculosis sufferers flocked to Denver in hopes that a dry climate meant a cure. Many arrived in Denver only to die. Many remained uncared for, jobless and broke. At the time, the sick almost literally filled the streets of Denver.

First Patient

This situation prompted the Jewish Community of Denver to build a hospital to treat patients without charge, but a depression in the 1890's prevented its opening. In 1899, with the help of the B'nai B'rith organization, the institution accepted its first patient, a Catholic girl from Chicago.

National Jewish has always been a nonsectarian medical center, both in its admission and employment practices. The hospital operates in accordance with its motto: "None may enter who can pay; none can pay who enter." It is supported by contributions from friends all over the country.

NJH has 325 beds and operates at about 95 percent of capacity.

There are 18 buildings covering three square blocks on Denver's east side, in the area of Colfax Avenue and Colorado Boulevard. Tunnels connect all the buildings.

The buildings are situated close to the street on all four fronts, leaving the interior space a park-like campus away from the city bustle.

Facilities

More than four million days of care have been given to patients from every state in the union, and many foreign countries.

The following buildings serve as patient facilities:

New Hospital Building: Contains the followup clinic, patients' library, lounge, cafeteria, kitchen, and 90 beds for medical and surgical patients on the second and third floors.

B'nai B'rith Building: The largest hospital structure, it houses 141 patients.

Rehabilitation Dormitory: Provides accommodations for 44 patients who are physically ready to return home, but who are completing rehabilitation programs.

Heineman Building: Devoted entirely to infants and children; a 50-bed building with separate facilities for children's occupational



Dr. Shirley Appleby, chief resident in pediatrics at NJH, in the hospital library. A full-time librarian is on duty throughout the day to assist in reference work.

therapy, play therapy, rehabilitation service, a grade school (parts of the Denver Public School system).

Surgical and Clinical Facilities Building: Adjacent to the main operating pavilion, there is an instrument room equipped with the latest electronic devices for monitoring physiologic functions during surgery. Also included in this building are the x-ray department, pharmacy, dental office, pathology laboratory, medical records office, chief nurse's office, office of nursing education, clinical laboratory, physical therapy department, and medical staff offices.

New Rehabilitation Center: Completed in 1957, it consists of a three-story building of functional design with an adjoining all-purpose 221-seat auditorium with provisions for wheel-chair patients. The auditorium includes the newest available facilities for wide-screen

movies and the back of the stage is designed as a chapel for all faiths.

The first floor houses shops for woodworking, radio repair, precision instruments, ceramics, leather work, weaving, and a general shop.

The second floor has complete training facilities for such skills as beauty culture, barbering, printing, and a home economics department with a modern kitchen and a fully equipped sewing room. A broadcasting room provides facilities for transmitting live and recorded programs to all patients. The top floor contains classrooms and offices for the department of rehabilitation services.

The hospital was a four-fold program: treatment, research, rehabilitation, education.

Program

An unusual aspect of the treatment program of tuberculosis is the hospital's pioneering work in early ambulation of patients under appropriate and adequate chemotherapy. Since the most active antimicrobial agents are most effective when the tubercle bacilli are multiplying, activity, unless there is a physical contraindication, is prescribed for tuberculous patients in an effort to maintain the organisms in a multiplying phase.

Since the way in which individuals metablize such drugs varies, all patients, prior to initiation of antimicrobial therapy, have serum drug assay studies. This allows tailoring the dosage of the drugs to the patient's needs. During the four years of this program, there have been only three therapeutic failures in over 175 previously untreated patients who, at the time of admission, were excreting organisms susceptible to the drugs used.

The program has several psychologic advantages over the traditional bed rest treatment of tuberculosis. Rehabilitation of the tuberculous patient can begin almost at the same time that he enters the hospital. Instead of languishing in bed while he is getting well, the patient is encouraged and guided toward making a good use of his time in learning new skills or in improving skills already acquired.

Asthma

An unusual aspect of the asthma program at National Jewish Hospital is that the institution treats teenagers and adults with a regimen hitherto used only in the treatment of children under 15 years of age. For the past 20 years, information has been accumulating that if asthmatic children are separated before puberty from their home environment for a period of one to two years, over 80 percent will return home experiencing a sustained relief of symptoms. Although the long term effect with adults is unknown, most, following admission, experience similar symptomatic remission. The hospital's approach to the asthmatic is a total one, embracing physiologic, psychologic. and psychiatric evaluation. Patients can, as needed, participate in a comprehensive rehabilitation program.

Cardiology

The only patients who are admitted on the Cardiac Service are those who have lesions that are presumed to be amenable to cardio-vascular surgery. There are between 50 and 75 cardiac operations a year. In order to operate upon this number of cases, between two and three times that number must be screened. The hospital is fortunate in obtaining a wide variety of cardiac diseases to evaluate.



The Siemens Planigram as shown here and a new Westinghouse image amplifier are part of the equipment in the NJH radiology department.

The hospital also carries on investigations and treatment programs in such nontuberculous chest diseases as emphysema and chronic bronchitis.

Research

NJH was the first chest hospital in the country to establish a separate research department with a full time chief and facilities separate from the clinical laboratories of the hospital. This was in 1919. The hospital's research laboratories are the largest in the country in the area of tuberculosis and chest diseases, They were expanded recently with the completion of a five-story, million-dollar building.

The research program at National Jewish Hospital is currently under the direction of Dr. Gardner Middlebrook, whose investigations in microbiology, particularly pertaining to tuberculosis, are world renowned. He has done considerable work on the mechanisms of drug therapy in the treatment of tuberculosis. His original research work on tuberculosis by the airborne infection route, as well as his discovery of the catalase test and different serologic phenomena have given us an index as to the infectivity and/or the pathogenicity of the tubercle bacillus causing the infection. The INH microbiologic assay was developed in his laboratories, and this gives the clinician a method for determining the proper dosage of INH for the patient. A similar technique was devised to determine proper streptomycin dosage.

In the Cardiopulmonary-Physiology Laboratories, one of the first established in a chest disease hospital, researches in lung compliance and work of breathing are being carried on. One group is interested in the development of prosthetic material for cardiovascular surgery. Experimental surgery includes work with a heart-lung pump oxygenator, as well as open heart surgery performed under hypothermia.

A staff member recently presented a paper at the Third World Conference of Cardiology in Brussels, Belgium, dealing with the etiology and correction of ventricular fibrillation as it occurs in open heart surgery performed under hypothermia.

A comprehensive research program in asthma is under way, embracing such areas as the relationship of blood corticosteroids to stress, the personality structure of the asthmatic patient, and the significance of skin testing in relation to symptoms.

The facilities at National Jewish for rehabilitation recently have been greatly expanded.

Occupational therapists, social workers, and a vocational psychologist help the patient to explore his talents and pick prevocational work, if there is need for this exploration. When patients evidence a specific talent in prevocational work, they are allowed to take advanced courses off the campus as soon as they have medical clearance.

Many patients attend nearby high schools, universities, or trade schools. The goal of the rehabilitation program is to return each patient to his home or community as a well adjusted, independent individual. Patients participating in the rehabilitation program are housed in a "rehabilitation" dormitory. In this non-hospital setting, the patients can complete their training in an environment simulating more normal life.

Education

The educational program of the institution embraces the training of social workers, occupational therapists, student nurses, and other professional workers through affiliations with more than 20 universities and colleges throughout the country. There are 19 residents and fellows in training at National Jewish Hospital.

Library

The hospital's medical library contains over 5,000 volumes. The hospital subscribes to more than 100 scientific journals. It has a complete Quarterly Cumulative Index Medicus; the complete Index Catalogue of the Library of the Army Surgeon General's Office. A total of 158 texts and monographs were added in the past 12 months. NJH has working arrangements with the medical libraries of the County

Medical Society as well as the University of Colorado School of Medicine. There is a full time librarian on duty to assist in library and bibliographic research work. In addition, there are three separate patient libraries with popular and classical material.

Being a metropolitan resort area, Denver has good recreation facilities the year round. The hospital has a television lounge for staff physicians, and bowling, golfing, tennis facilities are all near the institution.

Winter sports are the most popular recreation. Weekend trips to the ski slopes are traditional, and on Mondays many of the staff appear with sunburned faces and aching extremities. It is common practice among the staff doctors to share expenses and use one automobile for the ski trips, since the distance to the slopes is within 50 miles range. Trains also make daily trips to the Winter Park Ski Lifts. In the summer, mountain climbing, picnicking, trout fishing, boating, and visits to ghost towns provide out-of-the-ordinary recreation.

Nearby Central City (40 miles), an hour's drive through beautiful Clear Creek Canyon, is another popular spot. Central City is an old Western town that has been preserved as it existed in the 1880's. The New York Metropolitan Opera Company traditionally comes here in the summer for an engagement; other theatrical fare includes Broadway productions.

Churches

Churches of all denominations are close by. Ministers of all faiths come into the hospital, also, and they are free to use the inter-faith chapel. For example, for Catholic patients, confessions and communion are regularly scheduled on campus. There are Jewish services in the beautiful Lewisohn Chapel on Saturday, and Protestant services are also held at the hospital.

New wide screen movies are shown twice weekly in a modern theater which is part of the Rehabilitation Center. Frequently there are appearances on stage of stars who are appearing professionally in the Denver area.



CLINI-CLIPPING



Areas of pain in Dysmenorrhea: a. Uterine; b. Unilateral; c. Bilateral; d. Midline; e. Following the ureters and down the thighs.

Why Wait to Air-Condition Your Office?



Air conditioning in your office can make working hours more pleasant and ensure greater efficiency during the hot summer months. In addition, says the author, it may prove a growth factor in your practice.

J. V. GALLAHER

Air conditioning, once considered a luxury, is now moving into the category of necessity. More than 1.5 million room air conditioners are sold annually, and many new homes come equipped with central air conditioning systems.

The business community led the way in these developments. Such enterprises as restaurants, department stores and movie theaters have used air conditioning for many years. (Recall those days when you ducked into a movie more to escape the heat than to enjoy the show?) Today more and more individual offices and entire office buildings operate in a climate of controlled temperatures. Air conditioning is such an accepted fact in the world of commerce that it is difficult to find a store in newly built-up suburban areas that is not air conditioned.

But what does all this mean to you as a physician?

It is apparent that as air conditioning becomes more commonplace, the physician who simply tries to "ignore" the heat may suffer a decline in his practice, losing patients to physicians with air-conditioned facilities. Incidentally, patients lost during the hot summer months are not likely to be recovered in the more temperate seasons of the year.

A physician should not wait to be prodded by other doctors in his locality before installing air conditioning. Those installing it first will benefit the most, and the benefits will continue long after the air conditioning of medical offices in a community becomes an accepted practice. Even if a physician in a small community has a monopoly on medical services, there will be certain benefits accruing to him, both material and intangible.

Air conditioning, regardless of what other physicians in an area do about it, will justify itself in several ways:

- It will increase professional receipts at the very time of year when patients generally shun a physician's office, if they possibly can. This is important to a physician because, selling only his professional time, he can not recapture lost receipts due to slack periods through a heavier load during peak periods. It just does not work out that way. Idle professional time is gone forever.
 - Some patients will even be inclined to

advance physical check-ups from late fall or winter to hot summer periods.

- Professional relations between a physician and his patients will be more pleasant and relaxed.
- A physician will be able to work at peak efficiency. Fatigue from heat, a serious factor for older physicians particularly, will be reduced to the vanishing point.
- More professional services can be rendered, more patients taken care of, and with less strain than otherwise.

Boost in Activity

Physicians in the past may have been reconciled to summer slumps in their practices, blaming this situation on the perversity of the human race, vacationing patients, and other convenient excuses. Now there's growing evidence heat is the prime villain. Even grocery stores, selling a basic year-round necessity which should not be adversely affected by weather, have experienced sales gains of upward of 15 percent after installing air conditioning. Certainly, grocery purchases are not postponable to the same degree as some professional services.

During heat waves, only the most elementary or pressing needs are taken care of by people, whether these needs are day-to-day consumer goods or professional services. The higher the thermometer rises, the greater the decline in activity. Those who do seek out a physician for services are likely to be hypercritical and the physician, himself, may be waspish.

Office assistants may make blunders during hot spells they'd otherwise not make. Their efficiency declines as temperature and humidity rise. In one study of office workers in Chicago it was found stenographic and typing errors increased 1,000 percent during hot spells in non-air conditioned offices.

To insist that an office assistant, or the physician for that matter, do the best possible work in 95-degree-plus heat, and expect patients to remain loyal and active, is to go counter to the normal reaction of people.

Even areas in the nation that may be con-

sidered relatively cool during the summer may need air conditioning for a minimum of 60 days a year. In some areas of the East, South and Southwest air conditioning may be necessary for 30 percent of the year.

The initial outlay for air conditioning is a capital item, subject to depreciation over its normal useful life. Depending on the tonnage of the system, its average useful life may range from 10 to 20 years (Bulletin F, Internal Revenue Service). Annual depreciation is a charge against the medical practice, deductible in a physician's income tax return.

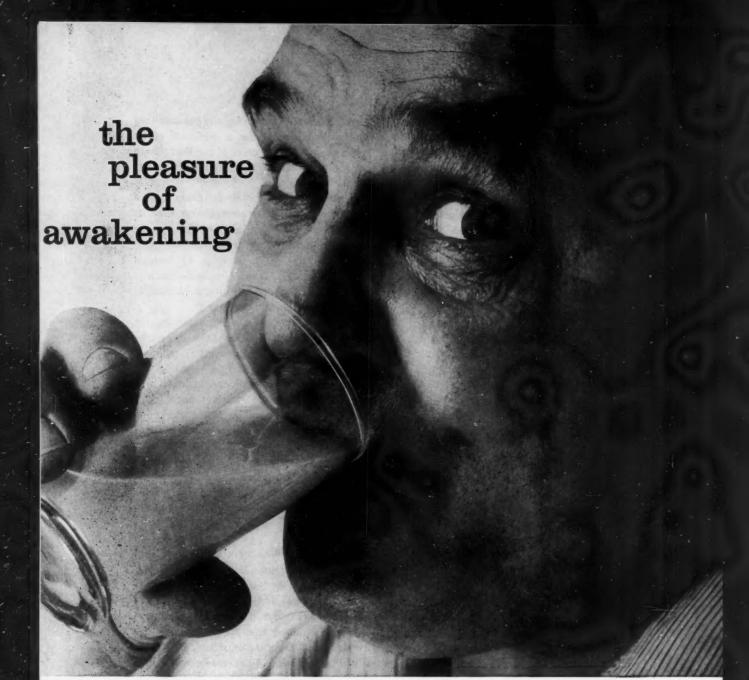
In this connection there is an income tax bonus for installing an air conditioning system. The annual depreciation charge will reduce a physician's income tax. To the extent of the income tax saving, an air conditioning system will cost less than the contract price. This saving may be a determining factor warranting installation when added to other considerations favoring it.

By using an accelerated depreciation formula, a larger part of the outlay may be recovered in the first years after acquisition, making for larger initial income tax savings, helping to defray cost of acquisition.

Depreciation Rate

A word of warning: If an office is rented, an air conditioning system will revert to the landlord at the expiration of the lease. However, if normal useful life of the air conditioning system is longer than the period the lease has yet to run, the installation may be written off within the period of the remaining tenancy, making more rapid recovery of cost possible. Example: Air conditioning system has 10 years of useful life. Lease has 8 more years to run. Depreciation rate: 12½ percent annually by straight-line method.

Physicians occupying a limited amount of space may find room air conditioners practical. These, ordinarily, will not revert to landlords, a consideration particularly for those physicians having short-term leases. If necessary, two room air conditioners may be employed if space so requires.



Free of barbiturate "hangover" after a night of deep, refreshing sleep...this is the promise of Noludar 300. One capsule at bedtime lulls your patient into undisturbed sleep for as long as 6 or 8 hours...without risk of habituation, without toxicity or side effects. Try Noludar 300 for your next patient with a sleep problem. One capsule at bedtime. Chances are he'll tell you

"I slept like a log"

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INVESTING

FOR THE SUCCESSFUL PHYSICIAN

Prepared especially for Medical Times by C. Norman Stabler, market analyst of the New York Herald Tribune.

TREND UPWARD IN FOREIGN SALE OF DRUGS

Standard & Poor's Corporation, international statistical organization, looks for United States drug companies to lift sales abroad this year to approximately the \$1,000,000,000 level. That would make their foreign business amount to more than a quarter of their total sales, estimated between \$3,500,000,000 and \$4,000,000,000.

The billion dollar figure includes both exports and the sales made by foreign manufacturing plants of American companies. For many United States producers, foreign sales represent a major share of total revenues, 45 percent in the case of Pfizer, and the percentage has been increasing in recent years for every leading American company, the statistical service reports.

It ascribes this growth to the dual influence of rising demand for pharmaceuticals overseas and a steady increase in the number of markets serviced by the U.S. industry.

During the last decade, there has been a gradual shift away from exports and toward packaging and producing overseas, to gain the advantage of proximity of markets, lower labor costs, relative freedom from exchange restrictions, and tax benefits to be derived from the use of tax havens, such as Panama. By channeling sales through a "base" country or remitting profits there from a subsidiary in a third

country, the tax burden on overseas operations can be substantially reduced, it said. Funds so accumulated are held in dollar accounts in United States or Canadian banks and generally used for further expansion overseas.

For investors, it adds, the implication of this increasing dependence on foreign markets deserves considerable attention. On the one hand, the potential for continuing growth in demand for pharmaceuticals overseas appears almost unlimited as world population rises and standards of living improve. On the other hand, the risk of devaluations, expropriations, and other uncertainties must be given full consideration. Moreover, variations in accounting procedures between companies make comparisons difficult and often meaningless.

The risk of doing business overseas falls into two principal categories: (1) the risk of expropriation of assets, and (2) the risk of currency devaluations. In the case of the former, the problem is substantially modified by the fact that the capital requirements of the drug industry are relatively light. While the overseas commitments of many companies are substantial in the aggregate, investments in any one country are generally not large.

With respect to devaluations, the problem is more real because it is a recurring one, particularly for firms operating extensively in South America. Companies which consolidate their foreign operations either set up a reserve against devaluations or take year-end write-offs as they occur. An alternative approach is simply to exclude from consolidated reports those foreign subsidaries subject to persisting exchange instabilities. Sterling Drug, after experiencing heavy exchange losses in Argentina and Chile in 1954, excluded these subsidiaries from consolidated statements in the following year.

Subsequently, all South American operations were removed from the company's consolidated accounts.

For comparative purposes, the accounting procedure relative to foreign operations is also an important factor that must be given full consideration in evaluating drug equities. The question arises principally for companies using tax havens to accumulate earnings abroad for further expansion in foreign makets. To the extent that income can be shifted to a "base" country where taxes are nominal or non-existent, a company's over-all tax liability can be reduced, since the U. S. Government cannot tax these profits until they are actually remitted to the parent company. This is true even if the funds are held in the U. S. or Canada for the account of the tax haven subsidiary.

Another consideration of importance con-

cerns competition abroad from foreign sources, the service notes. Since World War II the U. S. pharmaceutical industry has been able to capitalize on its long head start in antibiotics and the steroids, but recent research breakthroughs in Europe and the success of Russian and satellite country "molecule manipulators" suggest that the technological advantage of the U. S. industry is narrowing.

Moreover, there is reason to expect that Russia will increasingly use the drug field as a medium for advancing its interests in the underdeveloped areas of the world where patents are often not given full protection.

Standard and Poor concludes that, based on the prospect of continuing political and ecoromic uncertainties abroad and the likelihood of increasing competition from foreign sources, the industry's foreign earnings should be evaluated for investment purposes on a more conservative basis than domestic profits, despite the promising long-range sales potential overseas. Thus, it would appear reasonable to expect that price-earnings/ratios for drug companies receiving a major share of income from abroad will tend to be lower than those receiving most of their income domestically. This would be particularly true in cases where overseas profits are largely based on the use of tax sanctuaries and without provision for U.S. taxes.

NOT ALL BOOSTER EFFORTS BOOST

We are all acquainted with advertisements and articles in newspapers and magazines from various states and small localities in which an effort is made to bring new industries into the neighborhood. According to a Federal Reserve economist, about half of the booster efforts are hopelessly inadequate and misguided.

According to Donald R. Gilmore, the economist of the Boston Federal Reserve District, an enormous proportion of the hopeful "development" boards and associations are so sketchily organized and skimly financed they don't have a single full-time worker — much less trained industrial or regional planners.

In a survey executed for the Committee for Economic Development, Mr. Gilmore quizzed

14,000 of these organizations — the fact that there are so many raised his eyebrows—and he got answers from 11,000.

"The answers indicated that the 14,000 organizations had fewer than 10,000 staffers," he said. "Nevertheless, it seems certain they spent at least \$220 million in 1957."

He found that more than half the organizations have been created since 1950. Possibly the remarkable success of Governor Munoz Marin's Development Board in revitalizing Puerto Rico inspired some effort, but Mr. Gilmore said changing economic conditions forced many communities and even states to take steps to try to lift themselves by their bootstraps.

analgesia in depth

Announcing Equagesic

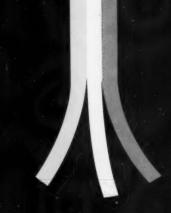
meprobamate and ethoheptazine citrate with acetylsalicylic acid. Wyeth

Relieves Pain · Relieves Anxiety · Relieves Muscle Tension

Equagesic

-the first non-narcotic preparation

to fulfill all requirements
of analgesia in depth



EQUAGESIC provides:

- 1. Relief of pain
- 2. Relief of the anxiety which magnifies pain
- 3. Relief of the muscle tension and spasm which add pain to pain

EQUAGESIC combines **EQUANIL**® (meprobamate) with ethoheptazine citrate and acetylsalicylic acid, the latter agents available separately as **ZACTIRIN**®.

EQUANIL is the proved, preeminent, musclerelaxant and antianxiety agent. **ZACTIRIN** is a non-narcotic analgesic, highly effective in painful disorders commonly treated in office practice.

Prior to introduction, **EQUAGESIC** underwent extensive clinical trial. A total of 463 physicians reported on 2,816 patients. Among 40 symptom complexes treated were disorders of the bones and skeletal muscles, particularly traumatic and arthritic conditions; headache, dysmenorrhea, neuritis, and neuralgia.

"Moderate to severe" pain occurred in 90.4% of the patients studied, 3.8% of the patients experiencing "mild" pain, and the remaining 5.8% "very severe" pain. Results of this extended clinical evaluation are highlighted in the tables opposite.



Optimum initial dose of **EQUAGESIC** is 2 tablets 3 to 4 times a day. Frequently, only 1 tablet 3 to 4 times a day will suffice. Supplied: In bottles of 50 scored tablets; each containing 150 mg. of meprobamate (white layer), 75 mg. ethoheptazine citrate (yellow layer), and 250 mg. acetylsalicylic acid (pink layer).

Degree of Relief from Pain

Degree of Relief	% of Total Patients
Complete Relief	29.4
Most Pain Relieved	49.8
Most Pain Remained	11.5
No Relief	9.3
	100.0

Relief from Pain Compared to Analgesic Previously Used (Was reported in 1,927, or 68.4% of patients.)

Relief from Pain	% of Total Patients
Superior	60.6
Equal	28.4
Inferior	11.0
	100.0

Degree of Relief from Muscle Spasm (Was reported in 2,074, or 73.6% of patients.)

Degree of Relief	% of Total Patients
Complete Relief	32.3
Most Spasm Relieved	48.0
Most Spasm Remained	12.3
No Relief	7.4
	100.0

Relief from Spasm as Compared to Previous Muscle

(Was reported in 998, or 35.4% of patients.)

Relief from Spasm	% of Total Patients
Superior	53.2
Equal	38.1
Inferior	8.7
	100.0

Undesirable Effects

2,590 patients, or 92.0%, reported no side effects. 226 patients, or 8.0%, reported side effects.

	No. of Patients
Drowsiness	72
Nausea and/or Vomiting Other Gastrointestinal	57
Complaints (Upset Stomach, Heartburn, etc.)	29
Itching, Skin Rash, etc.	15
Vertigo	14
Constipation	6
Miscellaneous	_33_
	226

TABLETS

Meprobamate and Ethoheptazine Citrate with Acetylsalicylic Acid



A Century of Service to Medicine

Composition

Each EQUAGESIC tablet contains 150 mg. meprobamate, 75 mg. ethoheptazine citrate (1-methyl-4-carbethoxy-4-phenyl hexamethylenimine citrate) and 250 mg. acetylsalicylic acid.

Action

Action

Ethoheptazine (Zactane®) was first synthesized in the Wyeth Institute for Medical Research. The general pharmacological properties and analgesic potency of ethoheptazine in animals have been reported. The clinical effectiveness and safety of this compound have been reported by Grossman, Golbey, Cass, and Batterman and their colleagues. In summary, ethoheptazine is an active analgesic which does not cause sedation, disorientation, constipation, suppression of cough reflex or change in pupil size, nor does it have addiction liability. The combination of ethoheptazine and acetylsalicylic acid (Zactirin®) in the recommended dosage has been found to be equivalent to codeine and acetylsalicylic acid in analgesic potency. The effectiveness and safety of Zactirin for relief of the common types of pain have been reported by several investigators.

The pharmacological action of meprobamate has been carefully studied and described in detail by Berger. This compound, although resembling mephenesin in structure, differs pharmacologically in that its anticonvulsant properties are more profound, its muscle-relaxant effect is of longer duration, it possesses an unusual type of sedative effect not common to either mephenesin or the barbiturates, and, finally, it is active when administered by the oral route. Meprobamate has been proved clinically effective as a skeletal muscle relaxant in patients with neurological conditions, rheumatic disorders, trauma, and as an adjunct to physiatric management of musculoskeletal and neuromuscular disorders. Meprobamate has been shown to be of considerable value in the management of anxiety and tension occurring alone or as an accompanying symptom complex to medical and surgical disorders and procedures.

A combination of meprobamate and acetylsalicylic acid was found by Mitchell to be a useful and safe medication for the treatment of skeletal muscle spasm of varied causes, such as myalgias due to infectious diseases; states of anxiety,

was found by mitchest to be a userial and sale insucation for the treatment of skeletal muscle spasm of varied causes, such as myalgias due to infectious diseases; states of anxiety, tension, and nervousness; premenstrual tension and primary dysmenorrhea; and functional headache. Splitter used EQUA-GESIC in patients suffering from musculoskeletal pain associated with muscle spasm and anxiety or tension and found

ciated with muscle spasm and anxiety or tension and found it to be an effective therapeutic agent.

The practicing physician's use of Zactirin administered simultaneously with meprobamate for the relief of muscle spasm and anxiety associated with common painful conditions caused us to prepare the combination oral dosage form. Investigators using meprobamate and ethoheptazine with acetylsalicylic acid tablets have reported this combination to be an effective antianyiety muscle relaxant analogic. tion to be an effective anti-anxiety, muscle-relaxant analgesic with low side effect liability.

Indications

EQUAGESIC is an effective and well tolerated anti-anxiety, skeletal-muscle-relaxant analgesic and may be used for relief of pain which is accompanied by either skeletal muscle spasm or tension and anxiety or both.

Administration and Dosage

The usual dosage of EQUAGESIC is one or two tablets three or four times daily as needed for the relief of pain and accompanying skeletal muscle spasm or anxiety.

Side Effects

Serious side effects have not been observed following the administration of EQUAGESIC. A small percentage of patients may experience nausea with or without vomiting and epigastric distress. Dizziness occurs but rarely when EQUAGESIC is administered in the recommended dosage. The meprobamate may cause drowsiness but, as a rule, this disappears as the therapy is continued. Should drowsiness persist, this symptom can usually be controlled by decreasing the dose.

It may be desirable in some instances to administer central stimulants such as amphetamine or mephentermine sulfate concomitantly to control drowsiness.

concomitantly to control drowsiness.

On rare occasions, meprobamate has caused severe allergic reactions. This has occurred in most instances in patients who have had only 1-4 doses of meprobamate and have not had a previous contact with the drug. Previous history of allergy does not appear to be related to the incidence of reactions. Mild reactions are characterized by an itchy urticarial or erythematous, maculopapular rash which may be generalized or confined to the groins. Acute non-thrombocytopenic purpura with cutaneous petechiae, ecchymoses, peripheral edema and fever have also been reported. More severe cases, observed only very rarely, may also have fever, fainting spells, angioneurotic edema and bronchial spasm. Treatment consists of the administration of epinephrine, an antihistaminic and, possibly, hydrocortisone or similar agents. Meprobamate should be stopped and reinstitution of therapy should not be attempted.

Meprobamate should be stopped and reinstitution of therapy should not be attempted.

EQUAGESIC or any of the ingredients used separately in the recommended dosage (Zactane®, Zactirin®, Equanil®) has not been reported to have caused constipation, change in pupil size, disorientation, any significant degree of tolerance, or untoward effects on the formed elements of the blood or cardiovascular system.

Caution

Preparations containing acetylsalicylic acid should be kept out of the reach of children.

Careful supervision of dose and amounts prescribed for patients is advised, especially with those patients with a known propensity for taking excessive quantities of drugs. Excessive and prolonged use of meprobamate in susceptible persons, for example, alcoholics, former addicts, and other severe psychoneurotics, has been reported to result in dependence on the drug. Where excessive dosage has continued for weeks or months, dosage should be reduced gradually rather than abruptly stopped since withdrawal of a "crutch" may precipitate withdrawal reactions of greater proportions than the original indication for prescription. Abrupt discontinuance of doses in excess of the recommended dose has resulted in some cases in the occurrence of epileptiform seizures.

EQUAGESIC should not be given to individuals with a history of sensitivity or severe intolerance to acetylsalicylic acid or meprobamate.

acid or meprobamate.

Instances of accidental or intentional significant overdosage with ethoheptazine combined with acetylsalicylic acid (Zactirin) have been reported to produce mild depression, drowsiness, and a feeling of light-headedness, with uneventful recovery. Appropriate therapy of the signs and symptoms as they appear is the only recommendation possible at this time. Overdosage with ethoheptazine combined with acetylsalicylic acid (Zactirin) would probably produce the usual symptoms and signs of salicylate intoxication. Observation and treatment should include induced vomiting or gastric lavage, specific parenteral electrolyte therapy for keto-acidosis and dehydration, watching for evidence of hemorrhagic manifestations due to hypoprothrombinemia which, if it occurs, usually requires whole blood transfusions.

transfusions.

Suicidal attempts with meprobamate have resulted in coma, shock, vasomotor and respiratory collapse. Although up to this time very few of these have been successful in spite of ingestion of large amounts of the drug, doses greater than those recommended may be hazardous. Meprobamate should be given cautiously, and in small amounts, to patients who have suicidal tendencies. In cases where excessive doses have been taken, therapy is symptomatic and may include central stimulants, pressor amines and careful observation. Sleep ensues rapidly after excessive dosage but is normal in character, with blood pressure, pulse and respiratory rates reduced to basal levels.

References available on request

Wyeth Laboratories Philadelphia 1, Pa.

The initial mistake is biting off far more than a small organization can chew, he found. "This is particularly true in Metropolitan areas where problems of transportation, adequate water and sewerage systems, industrial zoning, quality of education, living environment and culture and recreation all influence industrial growth."

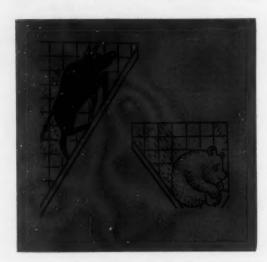
An even more fundamental mistake is squandering money on promotion, including advertising, without first doing the research and planning needed to have sound values to sell to industry.

Relatively underdeveloped states, such as

Mississippi, and states where an older economy has considerable unemployment, like Pennsylvania and Rhode Island, are more willing to spend tax money on landing new industries than rapidly growing states like Texas and California, he found. He came to the conclusion that under today's changing conditions, a totally voluntary effort to get new industries for a community or state is much less likely to succeed, no matter how well financed, than one in which government participates. And cooperation of the Federal government becomes increasingly necessary.

INDEXES AND THE MARKET

Many of the stock market's more technical followers hold that the market itself, through the action of its various stocks, provides the best tipoff as to where it is going, thus being superior as a guide to the familiar indexes of business.



One of the keenest students of the market, Jacques Coe, head of the Stock Exchange firm bearing his name, follows closely certain basic indexes for background and then turns his attention to more sensitive indexes for moves within broad swings. That he has been successful in this technical approach, it is only necessary to report that way last August, his studies indicated the bull market was over.

That was a most unpopular observation at

the time, and it wasn't until early in January that many joined him. We had to wait for the break in March before the Dow theory gave its classic signal of a bear market and even then the financial centers of the nation were well populated with investors who refused to admit it. Some may say that Mr. Coe's studies caused him to reach his conclusion too early, for the Dow Jones industrial average continued to move higher throughout the late days of 1959, making a new high early in January 1960. Its lag in confirming his statement, however, was short-lived, as things go in the stock market. A matter of a few months is as nothing at all when it comes to pinpointing a fundamental change in the trend of the market.

One long-term signal which he follows, and which occurs once every two or three years, is the Standard & Poor's average price index of low-priced shares. Mr. Coe figures the classical pattern is for this index to lag behind the market while going up, and then suddenly jump forward during the late stages of a bull market, making its high about four months before the overall market makes its high. He notes that this index made its high in April 1959—then failed to make a new high four

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the "Stylish Stout"
who'd like a
"Junior Miss"
figure

To help her slim down to 'Southing beauty' size—for her health's sake as well as for her social need—

SYNDROX®

- e controls the desire for constant filbbling suppresses appetite
- e takes the mind off food by encouraging activity and a brighter viewpoint
- Dose for appetite suppression: % to 1 tab. or tep, before meals.
- EVNOROX TABLETS (5 mg.)

McNEIL

HOMEN, LABORATORIES, INC. PHILADELPHIA 39. PA

months thereafter, in August-signaling that the bull market was over.

Another long-term barometer which he thinks is valuable is "Barrons" so-called Confidence Index. It is arrived at by dividing that publication's ten highest grade bond yields by the yield of Dow, Jones & Co.'s forty bonds. This index has been calculated back to 1932 and he states it has an excellent record, and that, "it invariably anticipates the stock market by four to five months, in both directions."

Probably one of its most important periods of helpfulness took place in 1942 when the stock market went into new low ground while the confidence index stayed well above its previous level. The index turned out to be correct, and a broad bull market followed. It turned down again in 1956, prior to the break in 1957, and it turned up in advance of the recovery during 1958 and 1959.

Last December this index broke out on the down side, giving warning that the trend was changing. A further decline hints there will be an irregular downward trend for the balance of the year, always assuming it maintains the forecasting ability it has displayed in the past.

Mr. Coe's third indicator has to do with odd-lot (less than 100 shares) statistics, for he regards this as another way of spelling-out the degree of public enthusiasm or despair. This index reached what he terms "the point of no return" some time last September, and again in December. Since then it has shown no real long term indications of changing its bearish direction.

On the other hand, the short-term inter-

mediate period of odd-lot statistics suggests that the very sharp decline during January and February temporarily came to a halt in March.

Mr. Coe has great respect for the serious work on money and banking figures by Bolton-Tremblay, of Montreal. In its April bulletin, this firm stressed the importance of the debt/loan ratio, which is the relationship, at any one time, between bank debits and bank loans. The firm has smoothed out and evaluated these figures in ratio form, going back to 1919, using ratios which eliminated monetary inflation tendencies.

After an exhaustive analysis the firm reached the conclusion that in no important previous stock market break has this loan ratio declined less than 20 percentage points. By mid-April it had declined only 7 percent.

The firm concluded at that time that there is no major bear market ahead, and that we should have at least one more upswing of substantial proportions. In the event of such an upswing, Mr. Coe suggests we should watch the debit/loan ratio carefully in order to conclude whether it is genuine or just a last gasp.

He adds that, "if, for instance, we did have a broad advance, and the D/L ratio went down—if his odd lot index during this phase turns bearish—if the index of low-priced shares fails to keep pace with the rest of the market and if Barron's Confidence Index does not change its basic direction, then we would have all the data at our command to forecast a period of serious liquidation of securities ahead, and certainly one would be amply forewarned."

POSSIBLE EFFECTS OF DISARMAMENT

It is a unanimous hope that some day the world will be able to get along without supporting great armament programs. There is a possibility, but not necessarily a probability, that a limited disarmament program can be reached.

"Value Line Investment Survey" seeks to appraise the effects on the aircraft industry in the event of such a limited agreement. It concludes that: (A) "The U.S. economy would experience only a mild recession, since the Federal government would be better able to compensate rather quickly for a moderate reduction in defense spending than under conditions of total disarmament."

"The first step would be cessation of nuclear testing but *not* of production of nuclear weapons. (Cessation of nuclear testing in itself does not imply a sharp cutback in defense

expenditures.) The next step would be a cutback in troops and related equipment (i.e., tanks, trucks, machine guns, etc.) Thirdly, fighter plane contracts and sub-contracts would be stretched-out or cancelled."

(B) "The aircraft industry would be hurt the moment the third step was taken. The government would be reluctant, moreover, to increase or extend *any* present defense contracts under a limited disarmament program."

(C) "The aircraft companies most vulnerable under limited disarmament would, therefore, be those that now have large fighter plane contracts and/or large subcontracts (prime contractors would take on more of the remaining work and farm out less to the smaller firms). All companies in the industry would be penalized to some extent by a limited disarmament. Loss of military business by any

of the companies would lead to intensified competition for the remaining military business."

Since military business provides the bulk of the aircraft industry's volume, international agreement to reduce military' establishments would undermine earning power. Some companies would be hurt much more than others. In the best position, The Value Line Investment Survey concludes, should disarmament be agreed upon, would be companies that have diversified into electronics and space exploration projects (which would probably attract even greater spending during a period of reduction in conventional weapons). The Survey cautions investors it would seem prudent to stand completely clear of the aircraft industry until the results of the Summit Conference can be assessed.

INVENTORY SWINGS, UP AND DOWN

One of the secrets of able administration of companies engaged in the manufacturing or distribution industries is control of inventory. If excess supplies are accumulated, and the market price declines, the



company with too much inventory suffers a setback. Conversely, if the business executive guesses correctly, he is in a position to make an extra profit.

Inventory figures consequently are watched closely by business forecasters, in an effort to determine whether too much, or too little, is in storage. If just the right amount could be kept on hand, it would do much to avoid business recessions, but there is no magic answer as to what is the right amount.

A. Rhett du Pont, a senior partner of the investment firm of Francis I. du Pont & Co., believes that for the first time businessmen are able to apply tighter controls to prevent inventory problems from developing.

Noting that inventory "scrambles" had occurred with each inquest into a new business cycle—in 1937, 1948, 1953 and 1957—Mr.

du Pont points out: "The year 1960 seems to be presenting something new under the sun: a refusal by businessmen to be stampeded in the matter of inventory accumulation." The current state of inventory control results from the combination of a number of factors, some of which "have been with us in the past, but never have so many been so clearly visible at one and the same time as in the present instance," he states.

Among these underlying reasons he cites: (1) deliberate maintenance of excess capacity by major producers of basic materials; (2) tendency of prices to remain steady for the first time since World War II; (3) impact of imports in maintaining ample local supply and in restraining prices; (4) increased use of computers and mechanized programming in planning the inventory needs of fabricators of finished goods; (5) role of tight money in making inventory carrying costly and (6) the new payas-you-go corporate taxation under the Mills Plan which reduces funds once available for investment until tax payment time.

However, the most important immediate influence on present inventory policy has been the action of the steel industry, Mr. du Pont

PENICILLIN, YOUR FIRST ANTIBIOTIC, NOW SYNTHESIZED FOR IMPROVED ORAL THERAPY

THE NEW, SYNTHESIZED PENICILLIN

from Schering

THIS IS THE TABLET ALPEN is the oral penicillin that provides on a fasting stomach peak antibiotic blood levels approximately twice as high as oral potassium penicillin V...and significantly higher than I. M. penicillin G.

Some strains of staphylococci resistant to other penicillins exhibit in vitro sensitivity to potassium phenethicillin.

ALPEN has greater freedom from the G. I. sequelae (overgrowth of resistant flora) sometimes observed with broad spectrum -mycins.

ALPEN gives much higher antibiotic levels within the first hour of ingestion by the well-tolerated oral route.

WHEN TO USE ALPEN Recommended in the treatment of infections caused by pneumococci, streptococci, gonococci, corynebacteria, and penicillin-sensitive staphylococci.

HOW TO USE ALPEN Depending on the severity of the infection, 125 mg. (200,000 units) or 250 mg. (400,000 units) three times daily may be used. In more severe or stubborn infections, a dosage of 500 mg. (800,000 units) t.i.d. may be employed. In beta hemolytic streptococcal infections, treatment should be continued for at least ten days.

PRECAUTIONS The usual precautions in the administration of oral penicillin should be observed. For further details see package literature.

Tablets: 125 mg. and 250 mg., bottles of 25 and 100. Powder for Oral Solution (lemon-lime flavored), 1.5 Gm. bottle (125 mg. per 5 cc. teaspoonful).

this is the tablet that gives higher peak antibiotic blood levels

HIGHER THAN I. M. PENICILLIN G HIGHER THAN POTASSIUM PENICILLIN V

ALPEN

Schering

ALPEN™-potassium phenethicillin

feels. Specifically, he commends the industry's stand that there would be no post-strike price increase until absolutely necessary and their ability to turn out ample steel in December and January to allay customers' fears of a shortage.

Mr. du Pont concludes: "There is a striking economic lesson here. We have seen that we need not have quick swings up and down in inventory. Knowing this, we should be able to take a long step toward stabilizing the business curve.

"There seems every reason to feel, in fact, that rational inventory buying at present has injected a new stability into the prosperity the country is now enjoying."

AN ANNUAL REPORT, ON WAX

If you don't like to read, you can get the annual report of the Seaboard Life Insurance Co. without opening your eyes. For the first time in corporate history, a company has "waxed" a condensed version of its report to stockholders.

The recording was made in person by Seaboard's president, Albert B. Myers. It is a

pliable plastic disc, which was slipped into the annual report.

It is a high fidelity permanent record made for Seaboard by Rank Records of America, Inc., in New York. The Rank Pliable Record can be mailed in a tube or letter, so the company hopes to sell many of them for business and advertising messages.

GAINS FORESEEN FOR CIGARETTE MAKERS

Less is being heard of the scare that linked cancer with cigarette smoking. "Investors Advisory Institute, Inc.," a subsidiary of Forbes, Inc., in an analysis of these companies expresses the view the industry is entering a new period of competition, as its major producers vie for stronger position in the booming filter-tipped market.

The costs of this heightened competition will show up in somewhat narrowed profit margins for a number of the producers during the intermediate period, it says. Others, however, will continue to reflect the gains afforded by the growing demand for filter cigarettes.

Actually, despite this competitive struggle, the present healthy tone of the cigarette industry contrasts sharply with more pessimistic appraisals of a few years ago. The producers continue to post record sales, profit margins have widened to levels that contrast favorably with any period in the last decade, and factors operative in the economy suggest that output will continue to gain about 5 percent annually over the next several years.

Other benefits have accrued to the cigarette makers in recent times. Emphasis upon effi-

ciency led to better inventory control of the raw and curing tobaccos that represent a large portion of the tobacco processor's investment. As a result, large sums were released for other uses. A new interest in diversification has arisen, and several of the concerns now have established operations in other fields that bear promise of far greater growth than that afforded by cigarette production alone.

No present survey of the cigarette industry would be complete without an evaluation of the tobacco-health issue, the analysis states. Reports on this controversy periodically appear in major news media. However, the industry appears to be weathering the recurring health scares fairly well and there are few tangible signs that the cancer issue has had adverse effects on American smoking habits.

In fact, smoking has increased. Last year alone, consumption rose 4 percent to 453.7 billion units. Consumption per capita by people over 15 has increased steadily to 3,760 cigarettes last year. The swing to filter brands undoubtedly contributed to these gains, as smokers simply switched to filters to secure protection instead of giving up smoking.

on-the-go relief from recurrent throbbing headach

including migraine syndromes, other vascular headaches, histaminic cephalalgia, and occipital neuralgia

Medihaler Ergotamine

Oral Inhalation of Micronized Ergotamine Tartrate

Fastest overall method for relieving recurrent throbbing headache

Approximates speed and predictability of relief following ergotamine injection.

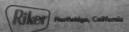
Eliminates delay in treatment...Medîhaler travels with the patient...ready and in use in 5 seconds!

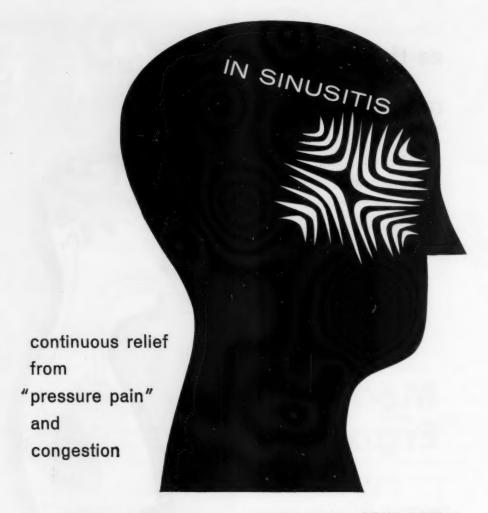
'In a series of over 300 episodes of vascular headache in 41 patients 'Medihaler'-Ergotamine was effective in about 70%.''

> Graham, J.R.: Faulkner Hospital, Jamaica Plains, Boston.

Desage: A single inhalation at onset of headache. Additional inhalations should be spaced not less than 5 minutes apart. Not more than 6 inhalations in any 24-hour period.

In 2.5 cc. stainless steel vial (50 doess) with plastic oral adapter. Each depression of metering valve delivers 0.36 mg ergotamizes tartrate self-propelled from the oral adapter.





NOVAHISTINE SINGLET TABLET

One Novahistine Singlet tablet usually gives prompt and continuous relief in sinusitis. It combines the decongestive Novahistine Effect with a virtually nontoxic, well-tolerated analgesic. Novahistine Singlet relieves pain, opens blocked nasal sinuses, reduces edema and helps restore normal sinus drainage and ventilation.

Dosage: One tablet every 6-8 hours (usually morning, afternoon and bedtime).

Each Novahistine® Singlet tablet contains 40 mg. phenylephrine HCl, 8 mg. chlorprophenpyridamine maleate and 500 mg. APAP (N-acetyl-p-aminophenol). Supplied in bottles of 50 tablets.

Novahistine formulas have been prescribed more than 9,000,000 times since 1952—based on National Prescription Audits.



PITMAN-MOORE COMPANY DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 6, INDIANA

THE COST OF SUPPORTING FARM PRICES



The story of agriculture over the last few years has been one of too much. An organization known as the Committee for Constitutional Government, Inc., which is opposed to taxpayers supporting farm prices at what it considers needlessly high levels, has drawn up a list of the extra charges paid for out of the public till.

Taxpayers catch it going and coming, because of these supports, the committee points out. They pay \$1 billion a year in storage costs alone.

They pay higher food and fiber costs. They pay for the money needed to export the cotton, wheat, and other commodities whose prices are above world prices because of the high supports. They pay the salaries of the many Government employees needed to administer the program.

They pay in unexpected ways.

For example, the losses due to spoilage and deterioration of the agricultural commodities under Government loan amount to millions of dollars each year. In the three fiscal years which ended July 1, 1959, these spoilage costs amounted to more than \$85 million. These losses will mount progressively as the surpluses grow and grow—as they are doing month by month, it points out.

The value of the agricultural commodities held in Government hands at present approximates \$10 billion.

Here is the way the committee summarizes:

"Today's agriculture is far different than the agriculture of 20 years ago. Yet our price support legislation for some crops is still based upon the Agricultural Act of 1938 and the amendments thereto. This program has been continued so long that some non-farm groups have a vested interest in prolonging them—in keeping their warehouses filled with government-owned wheat and other commodities.

"Thomas Jefferson once wrote that to continue outmoded institutions makes no more sense than requiring 'a man to wear still the coat that fitted him as a boy.'

"Instead of easing the problem, this obsolete program has made it worse. It has caused distortions throughout our agricultural economy. It has placed a ceiling over farm opportunities. It has enmeshed farmers in a network of government controls.

"And finally, it has caused very many of our people to regard all farm programs with suspicion and resentment."

THE OLD, OLD STORY

It is not news to any of us to be told the dollar won't buy as much today as it did some years ago. The National Industrial Conference Board reminds us of this sad fact again, however, and notes that the \$12,000 a year man of 1960 is left with the purchasing power of the \$5,000 a year man of 1939 after taxes and inflation have taken their toll.

In 1939, the husband and father of two with a gross salary of \$5,000 had \$4,941 to spend after taxes, the Conference Board points out in its weekly, "Road Maps of Industries" series.
Today, his counterpart must earn \$12,307
to net the same amount, the report adds. He
has forfeited \$5,489 to inflation and paid
\$1,877 in Federal and Social Security taxes.

The \$3,000 a year man of 1939 must be earning \$7,155 today just to "break even" in terms of purchasing power. In 1939, he paid \$30 in taxes and brought the balance home. Today, his taxes are \$885, while inflation takes another \$3,300.

THE TRAVELLING AMERICAN

Travel expenditures by Americans will expand to \$36 billion annually during this decade, according to the American Express Co.

Foreign travel, which is absorbing a growing proportion of the American family budget, is expected to rise 200 percent in the 1960's, from \$3 billion last year to \$6 billion annually, the company said.

Domestic travel is estimated to increase from

the current \$20 billion to \$30 billion annually.

American Express said it notes a potential increased demand in consumer loans for vacation expenses, auto loans, vacation savings plans, safe deposit boxes and travelers checks. It reports that travelers check sales have doubled in the past nine years and are estimated to double again in the present decade.

DRUG PRICES, HERE AND ABROAD

In the welter of words at the recent hearings in Washington on the price of various drugs and medicines, the fact that retail prices are less in foreign countries than in the United States was stressed several times. In most cases, the disparity applied to drugs that were not exported by the United States but were manufactured in countries abroad, either by foreign branches of American companies or by foreign concerns.

Thus their prices tend to follow employment costs, such as salaries and wages, as is the case with any other product. Employment costs, direct and indirect, represent more than three-quarters of all costs in American industry.

Smith, Kline & French Laboratories, Philadelphia, has prepared the chart below to illustrate retail prices in hours worked. It notes that "Time" magazines gives average hourly wages in manufacturing, in various countries, as follows:

UNITED STATES	 	 .\$2.22
GREAT BRITAIN	 	 67
GERMANY	 	 58
Mexico	 	 35
JAPAN	 	 30

Thus, United States wages are three times those in Europe and about seven times those in Japan. A secretary in Holland might get \$112 a month in contrast to her counterpart here, who would get \$360, and the company notes that the contrast is even more striking in the case of technical and administrative salaries.

Hours of Work Required to Buy Drugs in U.S.A. and Abroad

1959 RETAIL PRICES OF CHLORPROMAZINE

RETAIL PRICE U.S. DOLLARS	HOURS OF WORK TO BUY	50 TABLETS (25 MG.)	
.77	1hr.57min. FRANCE		
5.05	2 hrs.18 min. U.S.A.		
1.90	3 hrs. 18 min.	W. GERMANY	
7.05	4 hrs. 18 min.	CANADA	
1.62	4 hrs. 46 min.	ITALY	
2.29	7 hrs. 38 min.		JAPAN

SOURCES: PRICES: Kefauver Committee Exhibit 98, Jan. 21, p. 1544

LABOR—Based on hourly earnings in manufacturing, U.N. Monthly
Bulletin of Statistics; Japan, Time Magazine, Dec. 28, 1959.



in total infant nutrition with a physiologically balanced, complete formula — for a clinically smoother course of formula feeding

easier on everyone concerned—because Bremil-fed babies are less subject to commonly occurring problems such as digestive upset, diaper rash, perianal dermatitis, and hyperirritability (only liquid formula food with a guaranteed standardized physiologic Ca:P ratio of 1½:1)

efficient, well utilized protein, patterned on mother's milk, encourages excellent growth but helps avoid excessive renal solute load, thus guarding against stress-induced dehydration Standard Dilution:

Liquid - 1:1 with water. 13-fl.oz. tins.

Powdered — 1 level measure to 2 fl.oz. hot water.
1-lb. tins.

13/14/44

PHARMACEUTICAL DIVISION
350 Madison Avenue New York 17, N. Y.

REPORTS

SUSTAINED

CURRENTLY

AVAILABLE

Articles concerning the following industries and corporations are available on request from the firms indicated. You can do us a favor if you mention Medical Times as the source of your information.

SUBJECT

American Insurance Co. Amer. Machine & Foundry Amer. Smelting & Refining Amer. Tel. & Tel. Anderson-Prichard Oil Corp. Armour & Co. A. J. Bayless Markets, Inc. Beech-Nut Life Savers, Inc. Beneficial Finance Co. Bigelow-Sanford Carpet Birmingham Sound Reproducers Controls Co. of America Cooper-Bessemer Copperweld Steel Co. Crouse-Hinds Co. Crowell-Collier Publishing Co. Divco-Wayne Corporation Electronic Accounting Card Corp. Fruehauf Trailer Co. General Time Corporation General Precision Equipment Giannini Controls Corp. W. R. Grace & Co. Harsco Corporation Howe Sound Co.

International Harvester Co.
International Nickel Co.
Lockheed Aircraft
Loral Electronics Corp.
P. R. Mallory & Co.
Mangel Stores Corp.
National Distillers & Chemical

N. J. Natural Gas Co. Non-Ferrous Metals Office Equipment Industry Oil in Gulf of Mexico Pittston Co. Pittston Corporation Polaroid Corporation

R. J. Reynolds Tobacco Co.
Standard Financial Corp.
J. P. Stevens & Co.
Swift & Co.
James Talcott, Inc.
Tampa Electric Co.
Texas Gulf Producing Co.
United States Steel Corp.
Universal Oil Products Co.
Virginia Electric & Power
Whirlpool Corporation

FIRM

Hornblower & Weeks Thomson & McKinnon Robert Garrett & Sons Bache & Co. Paine, Webber, Jackson & Curtis Vilas & Hickey Hayden, Stone & Co. Reynolds & Co. Hardy & Co. Harris, Upham & Co. N. Y. Hanseatic Corp. W. E. Burnet & Co. Blair & Co. W. E. Hutton & Co. Cohen, Simonson & Co. Carl M. Loeb, Rhoades & Co. Lee Higginson Corp. Purcell & Co. Halle & Stieglitz Herbert E. Stern & Co. Paine, Webber, Jackson & Curtis Joseph Walker & Sons Halle & Stieglitz Beonning & Co. Butcher & Sherrerd

W. E. Hutton & Co.
Reynolds & Co.
Carreau & Co.
Sutro Bros. & Co.
Fahnestock & Co.
Eisele & King, Libaire, Stout & Co.
Robinson & Co., Inc.

G. A. Saxton & Co. Harris, Upham & Co. E. F. Hutton & Co. Calvin Bullock Theodore Tsolainos & Co. Ira Haupt & Co. Drexel & Co.

Reynolds & Co.
Glore, Forgan & Co.
Paine, Webber, Jackson & Curtis
Orvis Brothers & Co.
E. F. Hutton & Co.
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26 Broadway

PROFESSIONAL COATS FOR PHYSICIANS

A

A Blouse style with fly-front concealed zipper. Snap fasteners at shoulder and collar. Polar striped white Dacron. Sizes 34-48. Price: \$8.95, plus 35c shipping costs.

B Soft tailored 2-button, single-breasted jacket in white Dacron Taffeta. Three patch pockets and attached pearl buttons. Sizes 34-48, regulars and longs. Price: \$9.75, plus 35c shipping costs.

C Slip-over shirt with belted back and convertible collar. Sizes: Small, Medium, Large, X-Large. Price each: In Sanforized White Twill, \$3.95; in Dacron-Pima Cotton, \$9.75. Add 35c shipping costs for each garment ordered.

D Laboratory coat with back slit for stride freedom and side vents for easy access to inner pockets. Sizes 32-48. Price each: In Sanforized White Twill, \$5.95; in white Orlon, \$13.95. Add 35c shipping costs for each garment ordered.



10% discount on orders for 6 or more



MEDICAL TIMES OVERSEAS, INC.

1447 Northern Boulevard Manhasset, New York

GUIDE FOR INVESTORS

Based on recommendations of the Securities and Exchange Commissions in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

- 1. Think before buying, guard against all high pressure sales.
- 2. Beware of promises of quick spectacular price rises.
- 3. Be sure you understand the risk of loss as well as prospect of gain.
- 4. Get the facts—do not buy on tips or rumors.
- 5. Give at least as much thought when purchasing securities as you would when acquiring any valuable property.
- 6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.
- 7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects.

FASTER THAN THE EYE

Old time prestidigitators used to say to the audience, "I will show you that the hand is quicker than the eye."

Electronics Corporation of America, Cambridge, Massachusetts, announces it has developed goggles that "blink" one hundred times faster than the human eye. They are designed for protection against the effects of atomic flashes which might take place so far away that they wouldn't affect any other part of your body anyway, but could still injure the retina.

"BIG TICKET" ITEMS STILL POPULAR

High interest rates are not slowing purchases of homes, cars and merchandise a recent survey by the big brokerage house of Merrill Lynch, Pierce, Fenner & Smith showed.

Describing the survey as the largest stockholder ever made, Merrill Lynch reported that 89 percent of its 143,000 customers said they are not deferring purchases of "big ticket" items as a result of tight money.

OUEST FOR THE OUICK BUCK

John Magee, technical analyst of Springfield, Mass., complained recently that he was upset when a visitor declared flatly that he is interested only in short-term transactions. The usual term is "for a quick turn," or to make a quick buck.

Mr. Magee says that usually such a person is someone whose total experience in securities is represented by the three Savings Bonds he owns and the five shares of East Keokuk Light and Power that were in grandpa's estate.

"Now from our point of view, there is nothing either "good" or "bad" about short-term speculation, in a moral sense," he observes. "There is a proper place for the floor trader, the professional speculator, etc. Their operations, unless fraudulent or designed to manipulate the market, are useful and perhaps necessary, since it is through their purchases and

■for a smooth downward curve

New Rautrax-N results in prompt lowering of blood pressure.1 Rautrax-N, a new and carefully developed antihypertensive-diuretic preparation, provides improved therapeutic action¹ plus enhanced diuretic safety for all degrees of essential hypertension. A combination of Raudixin and Naturetin, Rautrax-N facilitates the management of hypertension when rauwolfia alone proves inadequate, or when prolonged treatment, with or without associated edema, is indicated.

Naturetin, the diuretic of choice, also possesses marked antihypertensive properties, thus complementing the known antihypertensive action of Raudixin. In this way a lower

dose of each component in Rautrax-N controls hypertension effectively with few side effects and greater margin of safety.

Other advantages are a balanced electrolyte pattern¹⁻¹⁶ and the maintenance of a favorable urinary sodium-potassium excretion ratio.2-16 Clinical studies1-5 have shown that the diuretic component of Rautrax-N—Naturetin—has only a slight effect on serum potassium. The supplemental potassium chloride provides additional protection against potassium depletion which may occur during long term therapy.

Rautrax-N may be used alone or in conjunction with other antihypertensive drugs, such as ganglionic blocking agents, veratrum or hydralazine, when such regimens are needed in the occasionally difficult patient.

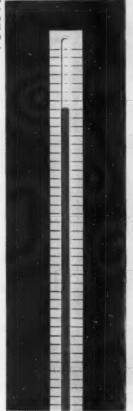
Supply: Rautrax-N—capsule-shaped tablets providing 50 mg. Raudixin (Squibb Rauwolfia Serpentina Whole Root) and 4 mg. Naturetin (Squibb Benzydroflumethiazide), with 400 mg. potassium chloride.

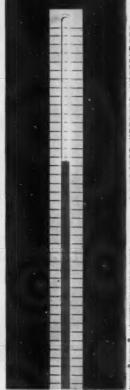
Dosage: Initially-1 to 4 tablets daily after meals. Maintenance-1 or 2 tablets daily after meals; maintenance dosage

may range from 1 to 4 tab lets daily. For complete instructions and precautions see package insert. Literature available on request.

References: 1. Reports to the Squibb Institute, 1960. 2. David, N. A.; Portar, G. A., and Gray, R. H.: Monographs on Therapy 5:50 (Feb.) 1960. 3. Stanberg, E. S., Jr.; Benedetti, A., and Forsham, P. H.: Op. cit. 5:46 (Feb.) 1960. 4. Fuchs, M.; Moyer, J. H., and Forsham, P. H.: Op. cit. 5:55 (Feb.) 1960. 6. Fuzzietti, H. J. L.; and Stewmorth, L.: Op. cit. 5:14 (Feb.) 1960. 6. Ing. G. H., Jr.; Shaw, D. M., and Bogdonoff, M. D.: North Carolina M. J. 2,119 (Jan.) 1960. 7. Cohen, B. H.; M. Timas, to be published. 8. H.; Stephenson, C. Stanberg, J. St









The proved, effective antihypertensivenow combined with a safer, better diuretic

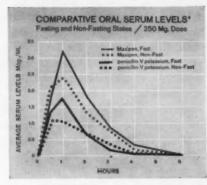
announcing a new product...





MAXIMAL ABSORPTION Acid stable, extremely soluble. MAXIPEN is rapidly absorbed from the gastrointestinal tract.

MAXIMAL BLOOD LEVELS Substantially higher than potassium penicillin V (higher levels than with intramuscular procaine penicillin G). You get injection levels with a tablet.



*Based on 3294 individual serum antibiotic determinations. Complete details on request.

MAXIMAL FLEXIBILITY May be administered without regard to meals. However, highest absorption is achieved when taken just before or between meals.

MAXIMAL ORAL INDICATIONS Indicated in infections caused by streptococci, pneumococci, susceptible staphylococci, and gonococci, including:

pneumococcal pneumonia gonorrhea tonsillitis laryngitis otitis media streptococcal pharyngitis

impetigo susceptible staphylococcal abscesses (with indicated surgery) cellulitis lymphangitis pyoderma

Also prophylactically in secondary infections following tonsillectomy, dental extractions, other surgical procedures.

Dosage: For moderately severe conditions, 125 to 250 mg. three times daily. For more severe conditions, 500 mg. as often as every four hours around the clock.

Note: To date, MAXIPEN has not shown less allergic reactions than older oral penicillins. Usual precautions regarding administration should be observed.

Supplied: MAXIPEN TABLETS, scored, 125 mg. (200,000 units) bottles of 36; 250 mg. (400,000 units) bottles of 24 and 100. MAXIPEN FOR ORAL SOLUTION; reconstituted each 5 cc. contains 125 mg., in 60 cc. bottles.

Triumph of Man Over Molecule Designed by Pfizer for Maximal Benefit



New York 17, N. Y. J. B. Roerig and Company Division, Chas. Pfizer & Co., Inc. Science for the World's Well-Being TM sales that liquidity is maintained and values adjusted promptly in period of rapid change.

"But for the innocent and hopeful newcomer to Wall Street the apparently Easy Bucks simply aren't there when he goes to reach for them. It would be a kindness for someone to tell such persons that the fabulous riches accumulated on short-term deals are often (2) the result of pure luck, a gambler's chance, with the odds heavily loaded against the tyro, or (b) a plain lie. Such a lie may emerge from the promotion material of somebody with something to sell. It often refers to the extreme low of 1957 and the extreme high of 1958 in some stock which had a phenomenal rise. The innocent one does not understand that in real life one does not even dare hope to buy at the very bottom and sell out at the very top."

LET'S CHECK THE OIL



The oil industry, born in this country, starts its second century of operation this year. Its trade association, the American Petroleum Institute, peers into the future and sees the prospect bright.

Among other things it predicts its scientists will discover how to convert oil into such products as asphalt, fertilizers, insecticides and even synthetic foods, and that it will continue to power automobiles and heat our homes despite competition from new space age fuels.

The institute believes the industry will lay even heavier emphasis on research during its second century. Surveys indicate it will spend \$328 million on research in 1962 against an expenditure of \$300 million this year. Research work is already underway on the fabulous fuel cell—the device which may create electricity out of oil directly, without combustion.

A Massachusetts parking lot is already bulldozing its snow into a big pit and melting it by discharging exhaust gases from oil burners under water.

The A.P.I. list of possibilities for oil includes the creation of synthetic protein from oil to help feed underdeveloped areas. The manufacture of fats, sugars and other carbohydrates from oil already is possible, and the Germans made butter out of oil during World War II.

Far from worrying about competition from the atom, the oil people are looking forward to nuclear blasting as a means of freeing oil from shale and tar sands and creating giant underground storage caverns.

Waterways as large as the St. Lawrence Seaway could be kept open year-round by "bubbling" warm water up from the bottom from underwater diesel or turbine driven compressors powered by oil, A.P.I. claims.

HANDLE WITH CARE

The cost of dishes broken during the washing process in the nation's leading restaurant chains amounts to anywhere from ½ of 1 percent to something over 2 percent of total food and beverage sales, according to a survey conducted by "Chain Store Age" magazine.

The survey also reveals that the cost of dishwashing labor ranges from 1 percent of sales to over 5 percent, depending on the chain.

Fully 84 percent of the reporting chains told the magazine that they considered breakage of china and glassware to be a problem. THE CLASSICAL TREATMENT FOR VAGINAL MONILIASIS

VAGINAL TABLETS

the only SPECIFIC ANTIMYCOTIC VAGINAL TABLET WITH A GEL FORMING BASE

A vaginal therapy: Methylrosaniline chloride (gentian violet) has generally proved the most effective and specific agent for the treatment of vaginal candidiasis caused by the fungus Candida.

Hyva Gentian Violet Tablets virtually eliminate the principal disadvantages of present gentian violet preparations. They may be handled and used without staining and have psychological and aesthetic acceptance.

Hyva combines the fungicidal action of gentian violet (1.0 mgm.) with three active surface reducing agents and bactericides.* These active ingredients have been incorporated into a mildly effervescent "gel" forming base which provides for maximum and prolonged effectiveness. Shorter treatment time is required without the usual messiness normally experienced.

One tablet intravaginally for 12 nights. When necessary one tablet twice daily may be recommended. Patient should take a Nylmerate Solution water douche on arising and preceding next tablet application.

> Prescribe Hyva Gentian Violet Tablets with applicator-boxes of 12 tablets.

> > Write for descriptive literature



*Alkyldimethylbenzylammonium chloride

(0.5 mgm.)
Polyoxyethylenenonylphenol (10.0 mgm.)
Polyethlene Glycol Tert-Dodecylthioether
(5.0 mgm.)



HOLLAND-RANTOS CO., INC. 145 HUDSON STREET . NEW YORK 13, N.Y.

UNFAIR TO THOSE ON THE LAM

When a policeman says, "Let me check your gas," he may have something different in mind than would the filling station attendant. According to the magazine *Petroleum*, the Police Crime Laboratories can detect what part of the country an automobile came from by testing its latest tankful.

Not many motorists realize this, the magazine says, but a criminal claiming to have driven from Florida to New York might easily be trapped by a police check that showed the remnants of a tankful of New England winter gas in his car.

Even in the same localities, your filling station pumps a different gas into your car in July



than in December. The oil companies have learned to vary the volatility of gasoline by blending and other methods to suit seasonal and regional atmospheric conditions. Naturally the highest volatility gas is sold in the coldest regions and the coldest months.

So precise are the specifications that three arid states—Arizona, New Mexico and Texas—are split into two or more volatility districts to ensure delivery of the proper gas.

EXPECTS RECORD BUSINESS

The decline of the stock market in January and again in March caused a few forecasters to suspect the business trend will turn downward this year. Not included in this group is Dr. John W. Harriman, economist of Tri-Continental Corporation, the largest of our diversified closed-end investment companies, and of the Broad Street group of mutual funds.

He looks for 1960 to be not merely a good year for the economy, but a record year, without a dangerous boom and without a dangerous decline.

Taking note of the uncertainties that arose from the decline of stock prices in the face of optimistic prophecies for business, Dr. Harriman holds that "consideration of business prospects should be made in a Janus-like way, by looking both backward and forward. This approach is logical," he maintains, "since a substantial cause of uncertainty lay in the underestimation of the excellance of the results of 1959 and an overestimation of the outlook for 1960."

"Because of the steel strike, it became popular to play down 1959, which, as the figures show, was truly a record year in most respects. In contrast, and because of post strike expectations, it became popular to believe that settle-

ment of the strike would almost immediately precipitate a boom. Then, he said, "as subsequent developments failed to support these forecasts, disappointment resulted, and, as usual, the indicator swung too far to pessimism."

For the balance of 1960, Dr. Harriman expects "further expansion at a somewhat less rapid rate followed by a levelling off period which could extend beyond the end of the year." He said, "the economy will find support in the continued increase . . . in consumer spending for durable goods and services, business spending for capital assets, and state and local government purchases."

"The two great industries which have been subjected to so much publicity, steel and automobiles," said Dr. Harriman, "do not seem capable of fulfilling their earlier destinies. The former, however, should produce about 120,000,000 ingot tons of steel which would be some 80% of capacity and top the previous high of 117,000,000 for 1955. The latter industry should sell around 6 million U.S. made passenger cars which would be substantially above the average of 5.4 million for the four years following the gigantic auto year of 1955 when sales reached 7.4 million."

Sterazolidin

a well balanced therapy in all forms of rheumatic disorder

The combined action of phenylbutazone and prednisone in Sterazolidin results in striking therapeutic benefit with only moderate dosage of both active agents.

In long-term therapy of the major forms of arthritis, control is generally maintained indefinitely, with stable uniform dosage safely below that likely to produce significant hypercortisonism.

In short-term therapy of more acute conditions Sterazolidin provides intensive anti-inflammatory action to assure early resolution and recovery.

Sterazolidin®, brand of prednisonephenylbutazone: Each capsule contains prednisone, 1.25 mg.; Butazolidin® (brand of phenylbutazone), 50 mg.; dried aluminum hydroxide gel, 100 mg.; magnesium trisilicate, 150 mg.; homatropine methylbromide, 1.25 mg. Bottles of 100.

Geigy, Ardsley, New York



Geigy

containing Oxethazaine a gastric mucosal anesthetic

OXAINE*

Oxethazaine in Alumina Gel, Wyeth

for gastritis

an original development, backed by 5 years' research and clinical trial Oxaine contains a gastric mucosal anesthetic for the relief of pain of gastritis.

OXAINE is indicated in the many patients who do not respond to diet, antacids and anticholinergics.

As reported in J.A.M.A., Oxaine brought complete relief to 96% of 92 gastritis patients suffering substernal pain and upper abdominal distress.

Deutsch, E., and Christian, H. J.: J.A.M.A. 169:2012 (April 25) 1959.

Oxame provides sustained anesthesia over many hours, unaffected by ebb and flow of gastric contents. Oxethazaine, the mucosal anesthetic in Oxame, is 4000 times more potent topically than procaine. Safe, not a "caine." Only two known cases of sensitivity (glossitis) occurred in extensive clinical trials. Easily administered, simple dosage—just 2 teaspoonfuls 15 minutes before meals and at bedtime. Bland, noncloying over long-term administration.

indigestion
nausea and vomiting
dyspepsia
esophagitis
duodenitis
irritable bowel
spastic colon
heartburn

How OXAINE Relieves Pain, Hastens Recovery

Gastric mucosa can heal more quickly, because local anesthetics inhibit acid and pepsin secretion, by preventing release of *gastrin* from the antrum of the stomach.

Patients tolerate a more varied diet and a larger amount of food—and, because of Oxaine, enjoy their food without fear of pain following meals.

Supplied: In bottles of 12 fluidounces.

Wyeth Laboratories Philadelphia 1, Pa.

They feel free of bloating and the disturbing sensation of fullness when only a little food has been ingested—because the anesthesia of OXAINE desensitizes irritated nerve receptors.

Those with irritable bowel syndrome are spared the embarrassing urge to defecate during meals—because Oxaine diminishes the exacerbated gastrocolic reflex.



A Century of Service to Medicine

HIGH COST OF THIEVERY

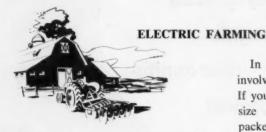
You and I pay as much as 15 per cent more for the goods we need than would be necessary if the world were honest. So we gather from Norman Jaspan, management engineer, who addressed a meeting of the Factory Management Council, in Syracuse, New York recently.

He accused workers, executives and unions alike of being responsible. And in addition to this 15 per cent, there's a few billion dollars a year that goes down the drain because of featherbedding, laziness, cheating on overtime, payola, kickbacks and bribes.

His firm specializes in checking losses caused by laxity and employee dishonesty. It seems to be a lucrative field. Mr. Jaspan predicted 250 concerns will be forced out of business this year by theft and fraud, and that direct thefts by executives and employees this year will be over \$1,000,000,000—twice as much as the losses by ordinary burglary and armed robbery.

Department store inventory shortages, he said, are running at 1.3 per cent on \$16-billion of sales—in a business where the profit ratio to sales is only 2.4 per cent. Supermarkets are losing 10 per cent of their profits to thefts.

Mr. Jaspan said both management and union officials are to be criticized for showing sheer inertia in dealing with the problems of dishonesty and gold-bricking in industry and commerce.



Of all the major segments of our economy, you may think that farming is the most removed from electronics. Not so, proclaims F. C. Jacob, of the University of California's Agricultural Engineering Department.

Speaking before the international convention of the Institute of Radio Engineers recently in New York, Mr. Jacob indicated the two are destined to enter into partnership.

That agriculture is big business, we all know. It has an investment of \$150,000,000,000, which is only a trifle less than that of all our manufacturing industries, and it employs 12 percent of the entire labor force. It is a mass production industry, with figures on dozens of eggs and quarts of milk running into tens of millions of units a day.

That spells the need for quality control, which in turn requires automatic high-speed machinery that can detect a wide range of variables such as internal spoilage and surface color. It is a competitive industry, and hence maximum efficiency pays a premium. In addition, many agricultural operations involve great precision, Mr. Jacob points out. If you can accurately measure the weight and size of an item, it can be automatically packed.

Why then has this enormous industry been so slow to pick up the advantages that electronics has to offer? He believes that both the managements of agricultural enterprises and the equipment companies they deal with are unprepared. Proper engineering and maintenance facilities are not readily available.

Second, the farmer appears to be engulfed in a conservative outlook built up from the great fluctuations and uncertainties that have characterized his industry.

These include social changes, reflected in eating habits, and in rezoning of agricultural property to residential. Political changes have raised and lowered subsidies and tariffs. Biological changes are represented in the population shifts of predatory animals and insects. The extremes of weather conditions are another reason while technical innovations, such as the shift in citrus marketing brought about the development of frozen juices.

Such experiences, he says, have thickened the skin of the farmer who has survived them,

FOR PROVEN MENOPAUSAL BENEFITS with extra relief from anxiety and tension

on the first visit, are nervous, apprehensive, and tense. PMB-200 or PMB-400 gives your patient the advantage of extra relief from anxiety and tension. particularly when the patient is "high strung," under prolonged emotional stress, or when psychogenic manifestations are acute. Proven menopausal benefits are confirmed by the wide clinical acceptance of

The vast majority of meno- "Premarin," specifically PMB-200-Each tablet pausal women, especially for the relief of hot flushes contains conjugated estroand other symptoms of estrogen deficiency, together with the well established tranquilizing efficacy of meprobamate.

> Two potencies to meet the needs of your patients:

arin") 0.4 mg., and 400 mg. of meprobamate. Both potencies are available in bottles of 60 and 500. AYERST LABORATORIES New York 16, N.Y., Montreal, Canada

gens equine ("Premarin")

0.4 mg., and 200 mg. of

meprobamate. When

greater tranquilization is

necessary you can pre-

scribe PMB-400 - Each

tablet contains conjugated

estrogens equine ("Prem-



making him aloof from new techniques.

But paradoxically, he points out, these same forces also force the farmer to economize, to speed up, to be more precise, to quality control, and ultimately to accept new methods to meet the conditions he cannot otherwise control.

Electronic equipment has made some small headway in the agriculture industry which does use various moisture measuring devices for grain and soils, color sorting machines for detecting rot or blood spots in eggs and for thinning lettuce or sugar beets. A metal detector adapted to a pneumatic conveyor helps eliminate wire and nails from chopped hay.

Under investigation is food preservation by high energy radiation and also by vacuum-radio frequency freeze drying. Use of sound reflection to measure the backfat on swine appears to be successful as does an optical-electronic method for measuring fruit maturity and an x-ray method for detecting frost damage in citrus fruits.

Future applications, Mr. Jacob indicates, may include guidance systems, automatic load control for harvesters and other machinery, and computers for making management decisions. Telemetering and automatic weighing equipment may be used to advantage, too.

A DOLLAR DOWN

Consumer credit, or installment purchasing, sometimes referred to jokingly as the "dollar down, and another dollar when you catch me," system, has played a major role in keeping the wheels of industry turning. If there were a sudden cessation of this method of financing the needs and desires of the consuming public, half our factories would close.

The practice is a sound one, and an essential one, but the Federal Reserve Bank of New York fears it may be carried too far from time to time. It is concerned that many consumers may be getting too much into debt.

"It is obvious," states the bank, "that there is a very real reason for concern that a sharp rise in consumer debt may, if continued, result in an unduly heavy burden on borrowers, particularly in the event of more serious recessions than those experienced in recent years."

The bank cited 1957 figures, the most recent available, relating to the amount of personal income committed to regular payments of all kinds including mortgages, life insurance premiums and social security.

About one half of all the spending units in early 1957 had committed 20 per cent or more of their income to these payments, while somewhat less than one-fifth were committed for 40 per cent or more, its study noted.

More significantly, the bank said, is the fact that in early 1959 nearly 20 per cent of all spending units in the "lower middle income" group were devoting 20 per cent or more of their disposable income to installment pay-

"Although it would be necessary to know much more about the characteristics of these units before valid inferences could be drawn as to whether or not they are overcommitted," the study said, "these tentative estimates suggest that a significant proportion of the population has committed itself to an extremely heavy burden of regular fixed payments."

"Consumer credit has played a valuable role in the postwar economy and, hopefully, will give an assist to the growing economy that is confidently expected in the 1960's," the bank continued.

"But the proliferation of new opportunities and methods for consumers to borrow—and new enticements to encourage them to do so—lead naturally to concern as to where all of this will lead.

Before the United States Senate is a bill that would require full disclosure of lending rates and other charges arising from consumer purchases.

At least one prominent banker is convinced this bill should never become law, for he feels it would result in banks, merchants, lenders and vendors refusing to offer credit to prospective buyers and borrowers.

He is Thomas C. Boushall, chairman of the Bank of Virginia, Richmond. He made his

RATIONAL THERAPY IN A WIDE RANGE OF COMMON SKIN DISORDERS

FURACIN-HC CREAM

INFECTED AND POTENTIALLY INFECTED DERMATOSES / PYODERMAS / ULCERS BURNS / AFTER PLASTIC, ANORECTAL AND MINOR SURGERY





FURACIN-HC Cream combines the anti-inflammatory and antipruritic effect of hydrocortisone with the dependable antibacterial action of FURACIN®, brand of nitrofurazone-the most widely prescribed single topical antibacterial. The broad bactericidal range of FURACIN includes stubborn staphylococcal strains, and there has been no development of significant bacterial resistance after more than a dozen years of widespread clinical use. FURACIN is gentle to tissues, does not retard healing; its low sensitization rate is further minimized by the presence of hydrocortisone.

FURACIN-HC Cream is available in tubes of 5 Gm. and 20 Gm. Fine vanishing cream base. water-soluble.

NITROFURANS—a unique class of antimicrobials / EATON LABORATORIES, NORWICH; NEW YORK Products of Eaton Research

views clear in a speech before a meeting of the National Installment Credit Conference of the American Bankers Association, held in Chicago, in March.

"The welfare of the national economy will be far more injured by a sudden halt and restraint in the extension of installment credit than can ever occur because the uninformed use of such credit runs it to excessive levels," he said.

The bill was introduced by Sen. Paul Douglas (D-Ill.). It provides that all charges incident to a loan or conditional sales agreement must be considered as interest and expressed in terms of annual simple interest.

The concept of the proposal is "erroneous,

impractical and unfeasible in its application and jeopardizes the person and purses of all individuals in the lending field" with its prosecution penalty, Mr. Boushall said. He holds it would be difficult if not impossible to state various charges including interest, insurance, taxes and unpaid balances in terms of annual interest.

He also said the bill would place administration of its provisions with the Federal Reserve Board.

Extending the board's duties into the field of fair trade practices would be foreign to its present responsibilities in the field of monetary and credit regulation through the banking system, he said.

THE SUPER SIXTIES

The Valley National Bank, Phoenix, Ariz., is known throughout the nation not only because it is one of our largest banks but also because of the editor of its publication, "Arizona Progress," Herbert A. Leggett. As a rule bankers are alleged to be below par in human emotions, but banker Leggett proves otherwise.

Referring to the nineteen-fifties as the Fertile Fifties, he delves into many names for the nineteen-sixties, one of which might be the Seductive Sixties. High-octane hucksterisms have beamed several others at our over-tranquilized citizenry, and a few presented by Mr. Leggett are:

The Sensational Sixties
The Spectacular Sixties
The Surging Sixties

The Stupendous Sixties
The Salubrious Sixties
The Scintillating Sixties

"Everyone to his own slogan," says Editor Leggett. This is a game anyone can play and don't worry if you can't spell. In fact, it might be better that way because then you could use such sibilant alliteratives as "Cynical Sixties" or "Psychopathic Sixties."

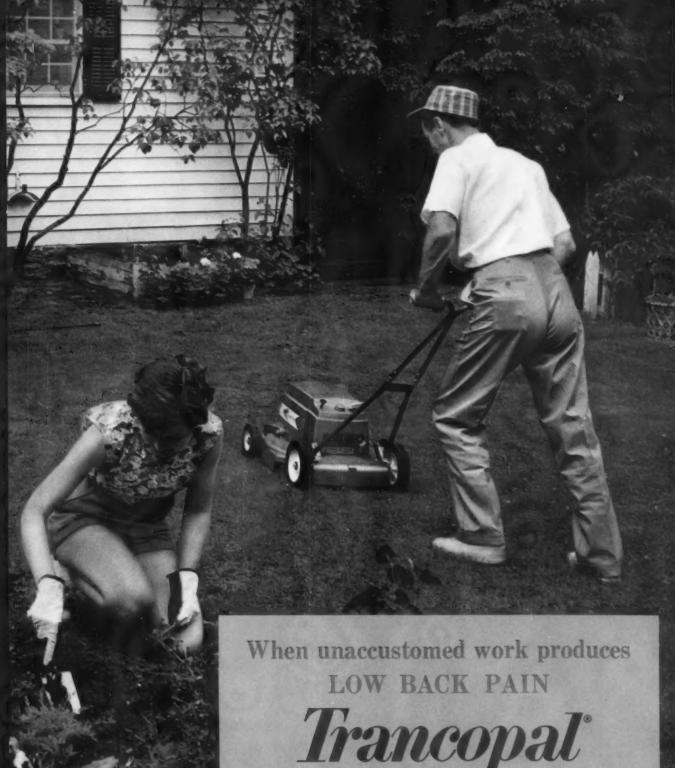
"If, heaven forbid, the forecasts prove wrong one should be prepared. Ever helpful, here are some unthinkable alternatives just in case: The S.O.S. Sixties, The Sobering-up Sixties, The Soul-searching Sixties, The Shoestring Sixties, The Synthetic Sixties, The Schizophrenic Sixties, The Social Security Sixties, etc. Whatever happens, it will undoubtedly be BIG."

WHERE'LL WE EAT?

There's less and less eating going on in the American home and more dependence on restaurants. So we learn from "Food Topics", and presumably it reflects well filled purses.

Sales at food stores in 1959 failed to keep up with the 1.8 percent increase in our population, but sales in dining out places far exceeded the population rise. "In a rising economy and with increasing family income," says the publication, "Expenditures for food are known to increase. Whether this increase will come to a greater extent in foods purchased in stores for home consumption or for consumption away from home is very much the question.

"It is also open to speculation whether, in



Trancopal[°]

A TRUE "TRANQUILAXANT"

relaxes skeletal muscle spasm

TRANCODAL BRAND OF CHLORMEZANONE



relieves
the pain
and disability
of
musculoskeletal
disorders

When enthusiastic gardening — or any of a host of other pleasant summer activities — brings on low back pain associated with skeletal muscle spasm, your patient need not be disabled or even uncomfortable for any length of time. The spasm can be relaxed with Trancopal, and relief of pain and disability follows promptly. The patient can usually continue his normal activities while taking Trancopal.

Lichtman^{1,2} used Trancopal to treat patients with low back pain, stiff neck, bursitis, rheumatoid arthritis, osteoarthritis, trauma and postoperative muscle spasm. He noted that Trancopal brought satisfactory relief to 817 of 879 patients (excellent in 268, good in 448, fair in 101). "Chlormethazanone [Trancopal] not only relieved painful muscle spasm, but allowed the patients to resume their normal activities with no interference in performance of either manual or intellectual tasks."

Gruenberg³ also prescribed Trancopal for 70 patients with low back pain and observed that it brought marked improvement to all of them. "In addition to relieving spasm and pain, with subsequent improvement in movement and function, Trancopal reduced restlessness and irritability in a number of patients." In another series of 193 patients Kearney obtained relief with Trancopal in 181 patients suffering from low back pain and other forms of musculoskeletal spasm.

Trancopal enables the anxious patient to work or play. According to Gruenberg, "In addition to relieving muscle spasm in a variety of musculoskeletal and neurologic conditions, Trancopal also exerts a marked tranquilizing action in anxiety and tension states."3 Lichtman¹ found that his patients in anxiety and tension states "... were in many instances able to continue their normal activities where previously they had been considerably restricted in their activities."1 ". . . Trancopal is the most effective oral skeletal muscle relaxant and mild tranquilizer currently available." (Kearney)4

Side effects are rare and mild. "Trancopal is exceptionally safe for clinical use." In the 70 patients with low back pain treated by Gruenberg, the only side effect noted was a mild nausea which occurred in 2 patients. In Lichtman's group, "No patient discontinued chlormethazanone [Trancopal] because of intolerance."

Trancopal

potent muscle relaxant effective tranquilizer

- In musculoskeletal disorders, effective in 91 per cent of patients.⁵
- In anxiety and tension states, effective in 89 per cent of patients.5
- Low incidence of side effects (2.3 per cent of patients).

 Blood pressure, pulse rate, respiration and digestive processes are unaffected by therapeutic dosage. It does not affect the hematopoietic system or liver and kidney function.
- No gastric irritation. Can be taken before meals.
- No clouding of consciousness, no euphoria or depression.

Indications:

Musculoskeletal disorders
Low back pain (lumbago)
Neck pain (torticollis)
Bursitis
Fibrositis
Myositis
Ankle sprain, tennis elbow
Osteoarthritis
Rheumatoid arthritis
Disc syndrome
Postoperative muscle spasm

Psychogenic disorders
Dysmenorrhea
Premenstrual tension
Anxiety and tension states
Asthma
Angina pectoris
Alcoholism

How Supplied: Trancopal Caplets®

(4)

200 mg. (green colored, scored), bottles of 100.

1000

100 mg. (peach colored, scored), bottles of 100.

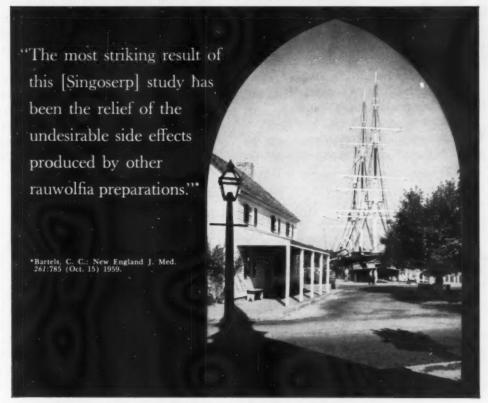
Dosage: Adults, 200 or 100 mg. orally three or four times daily. Relief of symptoms occurs in from fifteen to thirty minutes and lasts from four to six hours.

References: 1. Lichtman, A. L.: Kentucky Acad. Gen. Pract. J. 4:28, Oct., 1958 * 2. Lichtman, A. L.: Scientific Exhibit, Internat. Coll. Surgeons, Jan. 4-7, 1959, Miami Beach, Fla. * 3. Gruenberg, F.: Current Therap. Res. 2:12, Jan., 1960 * 4. Kearney, R. D.: Current Therap. Res. 2:127, April, 1960 * 5. Collective Study, Department of Medical Research, Winthrop Laboratories.

Winthrop LABORATORIES New York 18, N.Y.



from the New England Journal of Medicine:



results you can confirm in your practice:

"In 24 cases syrosingopine was substituted for the rauwolfia product because of 26 troublesome side effects; these symptoms were relieved in all but 3 patients."*

Side Effects	Incidence with Prior Rauwolfia Agent	Incidence with Singoserp	
Depression	11	1	
Lethargy or fatigue	5	0	
Nasal congestion	7	0	
Gastrointestinal disturbances	2	2	
Conjunctivitis	1 .	0	

(Adapted from Bartels*)

many hypertensive patients prefer

Singoserp® (syrosingopine CIBA)

because it lowers their blood pressure without rauwolfia side effects

Tablets, 1 mg. (white, scored); bottles of 100.

C I B A

Complete information evailable on request.

2/2779HB

the years ahead, those consumers moving up in income will adapt their tastes to include higher-priced quality foods, or whether their grown income, coupled with an increase in leisure time, will induce them to eat out more frequently.

"In the latter instance, retail food stores could very definitely lose a certain sales volume to eating and drinking establishments."

The food stores didn't do badly in 1959. They maintained an unbroken record for the decade of the 50's in setting new sales records each year.

In 1959 they sold \$53,660,000,000 of food. This was a 10-year jump from \$33,264,000,-000 in 1950.

Grocery store sales made up 86.7 percent of this total and the remainder went to specialty food retailers.

Back in 1950, sales of eating and drinking places totaled \$11,158,000,000. There was a rise in 1951 and 1952 but a substantial decline came in 1953. Then came a series of gains each year to 1959 when the sales amount to \$15,546,000,000, against \$14,792,000,000 in 1958.

MORE SAVINGS NECESSARY

Shortly after the Treasury's big flotation of 5 percent bonds in October, C. R. Mitchell, president of the United States Savings and Loan League, warned that a higher rate of personal savings will be necessary to counterbalance the amount going into government securities if a serious shortage of home mortgage credit is to be avoided.

He noted that substantial withdrawals of savings have been made from savings institutions, including savings banks and savings and loan associations, for the purchase of government securities.

"In the normal course of events, most of these savings would have been available to the home mortgage market," said Mr. Mitchell. "With their investment in government securities, they will have to be replaced with new savings if we are to avoid some serious problems in home financing."

The League president, who is president of the First Federal Savings and Loan Association of Kansas City, Mo., said that the recent sharp rise in yields on government securities has dramatized the difficulties the Treasury faces in trying to manage the national debt on a noninflationary basis.

"These difficulties are largely responsible for the recent rise in interest rates," said Mitchell. "The recent rise in interest rates is directly traceable to the fact that there are not enough real savings to go around to meet the demands of government, business, consumers, home builders and home buyers."

HAVE YOU A GOOD SUIT?

In the last twenty years, doctors increased their earnings 84 percent. From 1929 to 1958 dentists increased their earnings 83 percent, all self-employed persons 144 percent and salaried workers 131 percent. But lawyers gained only 58 percent; their expenses went up much faster. As late as 1940, lawyers earned more on the average than doctors. But by 1951 doctors were earning 50 percent more on the average and now are enlarging that gap. Virtually no doctors in private practice any length of time, earn under \$10,000 before taxes, re-



ports United Press International.

The Bar Association says that there is no geographical pattern in this situation. Lawyers have lost ground everywhere so fast "that the profession is committing economic suicide." Nor is there evidence that there are too many lawyers. In fact, the Association says lawyers

are doing relatively best in some of the states where there are the most attorneys in proportion to population. And the bar association concludes that, with the myriad complexities of modern business and personal life with its huge tax and other legal matters to worry about, there is a bigger need for lawyers than ever before.

Yet the American people are spending only one-third as much proportionately for legal advice as 25 years ago.

The medical profession may claim that, if you include all its members, the annual rate of pay is mediocre. Newspaper men would make such an assertion loudly, if questioned about their earnings.

Now we learn, from the American Bar Association, that lawyers are underpaid. Perhaps we should all get into trouble with each other so we could sue back and forth and raise the standard of living of that once lucrative profession. Personally we are peacefully inclined, so will sit this one out, but if you know of someone who should be sued, or should bring suit, appeal to them to do their duty.

It seems that the 1950's treated lawyers poorly and they failed to keep pace with the higher earning power of other professional men, industrialists and business men and even those in the skilled trades.

Things have reached the point, according to the Association, where one-half the non-salaried lawyers in the country earn less than \$7,400 a year before taxes. Salaried corporation lawyers and many big-time lawyers have tremendous incomes. But the average has fallen so low that fewer men are studying law.

Enrollment in U.S. law schools dropped from 56,000 in 1949 to 41,000 in 1957. The number of new lawyers admitted to the bar fell from 89, per million population, in 1949, to 57 per million in 1956.

THE THREE R'S

In the stock market the three r's might be called Risk, Rash and Regret, or perhaps we could say Rise, Recoil, Repent.

Editor Frank E. Moore of "The Redland Daily Facts," in Redlands, Cal., has written teacher Edward Schweikardt of Nyack, N. Y.'s high school, taking him to task for the latter's method of teaching his classes the facts of economic life. Mr. Schweikardt had his students buy a few shares of stock, hoping they would be more interested in the economy and would get an idea of what makes the ticker tick.

Something like that happened to Mr. Moore when he was in high school in California in 1929. A difference was that his teacher, the late Herbert Woodruff, didn't have the students actually buy the shares. He presented them with a mythical \$100,000 and had them invest it in five stocks of their choosing.

Mr. Moore warned that when Mr. Woodruff did the same thing, the market fell flat on its face. The five stocks "purchased"—Santa Fe, Bethlehem Steel, General Electric, Reynolds Tobacco, and Standard Oil of California—fell, of course, with the general market.

Mr. Moore feels that since the market broke right after he and the class "bought" their stocks that they had something to do with the break.

"We even admit to having lit the fuse to this financial block buster," he says. "It was all part of our education."

Well, there's a good ending to the catastrophe. The stocks that the class invested its \$100,000 in proved to be able to make a good comeback.

Curtis B. Woolfolk, of the New York Stock Exchange firm of Lester, Ryons & Co., located in Redlands, has calculated the value of these stocks as of last Dec. 1, the 30th anniversary of the market bust of 1929.

Woolfolk found that the original \$100,000 investment in 1959 had grown to \$276,240, and cash dividends to the amount of \$127,285 had been paid on the stocks.

"For having invested in these securities," says Mr. Moore, "we would have been \$303,-



Unless your practice is limited to bacteriology . . . or your patients are all in the upper income brackets...you have doubtless received complaints about the cost of the medication you prescribe.

what your patient

gives...and gets

Some of these complaints can probably be dismissed lightly as coming from cranks, who would complain about your fee for a midnight house call to save the life of a dying child. Others, however, are made seriously by thoughtful patients and deserve an answer in kind. You know what the patient gets from his pharmacist because you have prescribed it. Do you also know that the average cost of a prescription is about \$3.00? Only about one in 100 costs \$10.00 or more, and 3 out of 5 of the prescriptions are under \$3.00. These figures are based on retail prices. They include the manufacturer's research, development, and manufacturing costs and all distribution costs of the wholesale and the retail druggist. Only you and your patients can judge whether today's drugs at these prices represent a fair quid pro quo, an equitable balance between what is given and what is received.

This message is brought to you by 138 producers of prescription drugs as a service to the medical profession and in the same spirit, it is carried by this publication. For additional information, please write Pharmaceutical Manufacturers Association, 1411 K Street, N.W., Washington 5, D.C.

148 the richer today, if we had held them. That's before giving the Internal Revenue collector his claim.

In the 30 years since the five stocks were bought, only one showed a decline. It was Atchison, Topeka & Santa Fe which "cost" the kids \$20,650 back there and as of Dec. 1

was valued at \$18,200. But it paid \$14,810 in dividends during the period.

It's all in the interests of good economic education.

The kids of today may devise a formula for ending business cycles without resorting to socialistic devices.

TAMING THE BUSINESS CYCLE

Bonds tend to decline when money rates rise, and rise when money eases. The prospect of a cut in interest rates of a size sufficiently large to do the trick of raising bond prices is in doubt.

Edmond du Pont, senior partner of the New York Stock Exchange firm of Francis I. du Pont & Co., brings out that situation in an article in the firm's monthly publication "Investornews."

Writing on the subject "Tight Money and the Dollar: A Dilemma," Mr. du Pont traces the various factors leading up to the decline in bonds, and notes:

"Up until recently, it has been customary to assume that bond prices would drop during periods when the Federal Reserve was keeping a tight rein on credit, but that the losses would be recovered later when the banking authorities found it once again advisable to make money easy.

"Now, however, doubts have arisen that this is necessarily true."

These doubts, he says, are inspired by the shift of international payments against the U.S., resulting in a continuing loss of gold.

Here is how it works: foreigners build up dollar balances which if directed through their governments could make even great inroads into our gold supply.

The way to stem this gold outflow is to make investment in our securities alluring enough through higher rates of interest. These higher returns will divert investment from the gold hoard to our securities.

Now it appears the Federal Reserve has a bear by the tail and it can't let go. Here is how du Pont puts it:

"Our present scale of interest rates is proving at least partly successful in coaxing foreign balances to stay put. But that raises a companion problem.

"However optimistic we may be about business prospects for 1960, we must expect a business letdown sometime in the future. When that recession comes, the Federal Reserve ordinarily would be expected to move quickly to make money more plentiful. Interest rates in turn, would come down.

"However, with the Federal Reserve helping the Treasury defend the dollar, easing credit may prove impractical.

"To ease money and lower interest rates—especially if interest rates were high abroad—would encourage money to flow out of the United States for investment elsewhere.

"In short, the gold drain would be renewed and would be quite impossible to stop without impeding business recovery at home." Mr. du Pont concludes his article with a suggestion that the believers in the so-called modern economics think through once again the answer to the question: "Are you quite sure that we have tamed the business cycle?"

JOHNS HOPKINS HOSPITAL PLAN APPROVED

Non-profit hospitals across the nation may soon fall heir to unexpected long-range endowments as a result of a ruling by the United States Internal Revenue Service.

The ruling, which specifically approved the

tax-free life income plan offered donors by Johns Hopkins Hospital of Baltimore, could be a boon to all non-profit hospitals in their longterm fund raising programs.

According to Walter F. Penkins, president



NEW ESTROGEN APPROACH TO THE POSTMENOPAUSE

Menopausal symptoms are often intensified following the sharp drop in available endogenous estrogen during the early postmenopause.

At that time—when periods stop but symptoms continue—TACE is most valuable. It usually means a symptom-free adjustment to the postmenopausal state. How? TACE stores in body fat, releases slowly, evenly, in the same manner as a natural hormonal secretion. A normal course of TACE therapy is 30 or 60 days. But even after therapy stops, estrogenic activity continues, gradually tapers off, finally is exhausted in about 2 months.

Thus, sudden endometrial change doesn't occur, withdrawal bleeding is rare. Artificial stimulation and "estrogen dependence" are avoided. Complicated dosage adjustment is unnecessary. Finally, there are no "peak-and-valley" estrogenic effects.

You can observe this unique effect in your patients. Simply prescribe two TACE 12 mg. capsules daily for 30 days. A severe case may require an additional 30-day course.

THE WM. S. MERRELL COMPANY

New York . Cincinnati . St. Thomas, Ontario

of Johns Hopkins Hospital, the ruling gives hospitals a tax privilege previously reserved exclusively for churches and educational institutions. This is the way it works:

A donor gives securities to the hospital. The hospital then sells the securities and reinvests the financial yield in tax-exempt municipal bonds.

The tax-free income from the bonds is paid to the donor throughout his life and the life of a designated survivor. For income tax purposes, such income need not be reported as earned income by either the donor or his survivor.

At the termination of the contract, the total

fund reverts to the hospital. The donor also benefits by not having to pay a capital gains tax on any appreciated value of the securities turned over to the hospital.

Mr. Perkins said the hospital ruling follows by one year approval given to a similar plan for the Johns Hopkins University. Both rulings were occasioned by gifts made to the University and the hospital by Theodore C. Wiehe, vice president of Schenley Industries, Inc.

"The availability of the life income plan," Mr. Perkins said, "should encourage the donation of delayed endowments and strengthen the long-range financial position of the hospital."

WHEN TO SELL

Dr. Ira U. Cobleigh, economist and author of a number of books on investing, believes all of us in the stock market would do better if we gave as much attention to when to sell our holdings as we did to buying them in the first place. When we go to a theatre, we spot the nearest exit, in case of an emergency. The same practice could be useful to investors.

"There are books, reports, surveys, market letters and advisory services, all of which tell us about buying stocks," he says, "but the information on when to sell is meager indeed."

Most people sell on a hunch, get tired of holding a stock that "does nothing" or eagerly dump a promising security on the basis of some "hot tip" about another stock that may reach the moon. He asks, "Why is that most of us are so logical and sensible in the selection and purchase of securities, and so wooly, capricious and rudderless when it comes to selling?" We're lopsided. Good buyers and poor sellers. It reminds one of the conversation between a dinner guest and the late Jules Bache. In his dining room, Mr. Bache had several classic paintings, none worth less than \$100,000. So the guest inquired how it was that his host could afford such high priced



paintings. He replied, "Because I've always been a good seller."

Mr. Cobleigh's says one should consider selling "(1) when the market is within 15 percent of an all time high; (2) when a particular industry (in which you hold stock) is in a visibly static or declining earnings trend. as oil shares in late 1956; (3) when particular issues have attained the objective for which you purchased them or have started to display an adverse earnings trend; (4) when there's a demonstrably better stock available in the same price range; or (5) when you have need for money (this need can of course arise regardless of the height of the market or trend of earnings). So rather than guess or hunch your way out of good holdings, see if you can't apply some of the foregoing points in arriving at your next decision to sell."





painful breast engorgement prevented

Treatment of choice to suppress lactation.1 Clinicians2 have named TACE "... the most satisfactory drug for use at delivery in the suppression

Re-engorgement almost never occurs. In over 3,000 patients studied, 1.3 only 3 cases of refilling were reported.

Withdrawal bleeding rare, 1-3 because TACE, stored in body fat, is released gradually, even after therapy is discontinued.

Available ... 12 mg. and 25 mg. capsules

prevent hemorrhage due to uterine atony TACE with Ergonovine

1. Bennett, E. T. and McCann, E. C.: J. Maine M. A. 45:225. 2. Eichner, E., et al.: Am. J. Obst. & Gynec. 6:511. 3. Nulsen, R. O., et al.: Am. J. Obst. & Gynec. 65:1048.

of lactation."



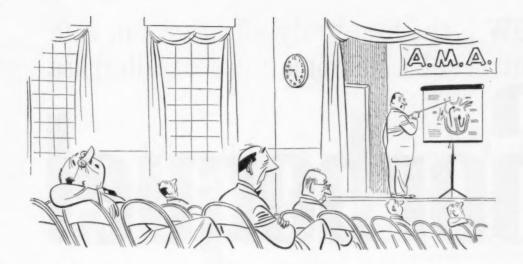
Merrell THE WM. S. MERRELL COMPANY
New York • Cincinnati • St. Thomas, Ontario



"Just other specialists as usual . . . No referrals here."



"Yes, dear, same old grind. A few more meetings and I'll be home."







NOW...the first truly effective and safe control of both chronic and acute diarrhea

SOPLOGICAL TABLET FORM

A totally new agent, for non-opiate control of the dual problem of diarrhea: too fluid feces, too frequent evacuations

Unexcelled therapeutic response, 85% of the chronic cases, 93% of the acute.1-2

The culmination of a decade of laboratory experimentation and over five years of clinical confirmation.

For too fluid feces, an extraordinary ability to absorb free fecal water.

For too frequent evacuations, superior, yet selective, antimotility action.

Convenient tablet form; simple, uncomplicated dosage schedule (1 tablet q.i.d.).

Even where all other agents have failed—Sorboquel arrests long-standing, uncontrolled, exhausting diarrheas

Unexcelled Therapeutic Response: Results of the Administration of Sorboquel Tablets1-8

	Response			
	No. of Patients	Excellent	Good	Poor
Chronic Diarrhea*	485	335	76	74
		84.	7%	15.3%
Acute Diarrhea**	332	288	22	22
		93	.4%	6.6%

^{*}Chronic diarrheas include irritable bowel syndrome, regional enteritis, diverticulitis and ulcerative colitis, postantibiotic enteritis, malabsorption syndrome, radiation proctitis, surgically short-circuited intestinal states. Diarrhea had persisted for more than a year in a large percentage with bowel movement frequency averaging from 5 to more than 10 a day. In most patients, Sorboquel controlled the condition within 3 days, even where other agents had failed.

^{**}Acute diarrheas include nonspecific gastroenteritis, enteritis, enterocolitis. Control of the diarrhea was achieved within 24 hours in most cases.

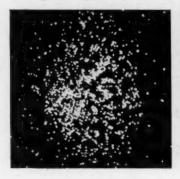


Dual-action Sorboquel arrests diarrhea even where all other agents have failed

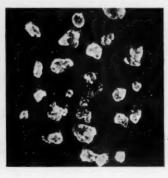
The components in Sorboquel: the culmination of many years of development

Sorboquel Tablets combine two unique and hitherto unavailable antidiarrheal agents—polycarbophil and thihexinol methylbromide. Acting together, through different but complementary mechanisms, these components in Sorboquel absorb free fecal water and quell hypermotility and associated spasm to an exceptional degree.

For too fluid feces, an extraordinary ability to absorb free fecal water (through the hydrosorptive action of new polycarbophil)



Dry State
Demonstration of the particulate nature of dry polycarbophil.



Swollen State
Note the particulate nature
of swollen polycarbophil. Impaction is
virtually impossible.



Demonstration of the dependence of swelling of polycarbophil on pH. (a) pH of stomach; (b) pH of duodenum; (c) pH of intestines.

A newly synthesized macromolecular substance exhibiting extraordinary capacity for absorption and retention of free fecal water $^{9-11}$ \blacksquare the colloidal suspension is free-flowing, since, in the swollen or hydrated state, the particulate structure is retained 9 \blacksquare exerts marked hydrosorptive action only on reaching the alkaline medium of the small intestine and colon \blacksquare virtually free of impaction qualities \blacksquare pharmacologically inert, not absorbed from the gut 12

Convenient tablet form; simple, uncomplicated dosage schedule

SORBOQUEL DOSAGE: For older children and adults, initial dosage of one SORBOQUEL Tablet q.i.d. is usually adequate. Severe diarrheas may require six, or even eight, tablets in divided daily doses. (Dosages exceeding six tablets a day should not be employed over prolonged periods.) Many patients can be maintained on one to three tablets daily after the diarrhea is brought under control.

SIDE EFFECTS: The incidence of side effects at recommended dosage is negligible. (The usual precautions when using parasympatholytic agents should be observed. Complete information regarding the use of Sorboquel Tablets is available on request.

DUAL ACTION

the first truly effective agent to control the dual problem of diarrhea: too fluid feces, too frequent evacuations

For too frequent evacuations, superior, yet selective, antimotility action (through the parasympatholytic action of thihexinol methylbromide)



90-minute film demonstrating hypermotility of gastrointestinal tract in patient.



6-hour film after administration of thihexinol to patient showing marked inhibition of gastrointestinal motility.



Inhibition of methacholine-induced spasm by thihexinol in isolated rabbit intestine. Time of graph is 40 minutes. (a) normal motility; (b) methacholine, 40 mcg./L; (c) thihexinol, 10 mcg./ml.

(c)

(a)

(b)

A new, superior parasympatholytic agent with a dominant inhibitory action on intestinal motor function13-16 onset of intestinal motor inhibition has been shown to occur within 10-20 minutes 14 does not interfere with gastric secretion or digestive processes dunusually free from atropine-like side effects • its enteral antimotility action permits polycarbophil to exert maximal water-binding effect

SUPPLIED: SORBOQUEL TABLETS, bottles of 50 and 250. Each tablet contains 0.5 Gm. polycarbophil and 15 mg. thihexinol methylbromide.

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the buffered acid vaginal douche with low surface tension

Surface tension of Massengill Powder in standard solution is 50 dynes/cm., compared to vinegar at 72 dynes/cm. This low surface tension enables Massengill Powder to penetrate and cleanse the folds of the vaginal mucosa. It also makes cell walls of infecting organisms more susceptible to therapy.

Massengill Powder is mildly astringent and soothing to inflamed tissue. Patients like its clean, refreshing odor.

Valuable adjunct in management of monilia, trichomonas, staphylococcus and streptococcus vaginal infections.

contains:

Ammonium Alum, Boric Acid, Phenol, Menthol, Berberine, Thymol, Eucalyptol, and Methyl Salicylate.

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The normal vagina has a pH of 8 to 4.5, but an infection usually causes the pH to rise. An alkaline mucosa neutralizes a simple, unbuffered acid douche like vinegar within 30 minutes.

In contrast, the buffered acid douche solution of Massengill Powder (pH 3.5 - 4.5) resists neutralizing. The normal, low pH is maintained for 4 to 6 hours in ambulant patients and as long as 24 hours in recumbent patients. This low pH inhibits the propagation of monilia, trichomonas vaginalis, and pathogenic bacteria, but permits growth of the beneficial Döderlein bacillus.

MASSENGILL POWDER

the buffered acid vaginal douche with low surface tension

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Prescription
For
Travel



IN NORTHERN WATERS

The visitor to Norway can get a good picture of the rugged life of the Vikings. Well preserved specimens of their famous longships and other artifacts are on view in museums, and at Stavanger visitors can climb aboard an authentic reproduction of a Viking ship. History books devote many chapters to the founding and historical importance of Trondheim, Norway's former capital city, but the residents of the city today, proud as they are of their great monuments, love their town for more than its past.

For them, the real power of its attraction lies in the hills, the mountains, the forests, lakes and streams, and the many idyllic spots along the Trondheim Fjord where city dwellers always have an opportunity to be in nature's rugged surroundings whenever city noise and bustle becomes too much. Relief is available, without charge, to anyone in Trondheim who possesses a pair of strong legs. No other means of transportation is necessary.

Like most coastal Norwegian cities, Trondheim can trace its history back to the Vikings. Olav Trygvason, founder of the city and progressive leader of his people, built his fleet of Viking ships on the banks of the Nid River. Thus the city that began as a shipbuilding center developed into an urban center, with its ideal location at the river's mouth, proximity to rich farmland, virgin forests and rich iron and copper deposits. Trondheim today ranks as the third largest city in Norway, after Oslo and Bergen.

With the rise of Christianity, the city became an apex for the cultural and social developments of this young nation until by royal marriage Norway became a Danish colony, remaining so for 400 years. The church seat was removed to Oslo, and Trondheim's days as the leading city were over.

What is left from the days of glory is the beautiful Cathedral, the largest in Northern Europe, where the Kings of Norway are still crowned. Here, too, is the Cathedral School, the first institution in Norway for higher learning, which at the outset concentrated on theology. Today, however, its technical academy trains engineers, architects, chemists and other scientists.

Trondheimers themselves are happy people who welcome tourists to their relatively small city with a courteous and friendly manner. Visitors



This awesome fjord makes cruise ship look like a toy. Village can be seen at the bottom of the picture.

TRAVEL

will find many shops specializing in exquisite articles of silver and gold and fine enamel ware. Other shops have excellent displays of local arts and crafts and particularly beautiful hand-knit goods, for which all of Norway is famous.

Viking Paradise

The problem of the camel passing through the eye of a needle was a cinch compared with the chances the Vikings ever had of sailing their heavy-laden longships into paradise.

It was to be a journey by both sea and land, and these royal passengers showed little concern for overweight loads. Among paraphernalia which burdened the burial ships were man and maid-servants, horses, oxen, dogs, peacocks (or other favorite pets), richly carved thrones and four-wheeled carriages, kitchen utensils, sledges, handlooms, and trunks full of articles with which to beguile the passing time. Provisions included wheat, wild apples, walnuts and hazelnuts. They planned to live it up, so to speak, in death.

The Vikings were known to Homer, and their raids were legendary in the Middle-East centuries before Christ. The earliest rulers were dispatched to their rewards on flaming warships set adrift, but around the Eighth Century Viking chieftains sought a less transitory means of attaining immortality. They had themselves decked out in finest jewels and raiment for their obsequies. The burial vessels were prudently drawn up on dry land—then all hands on board (both quick and dead) buried under secure mounds of earth and rock.

Well Preserved

As might be expected, these magnificent burial ships never set sail for Valhalla fortunately for us some were perfectly preserved in clay until excavation in our age. At the Museum of Bygdoy, just outside of Oslo, you can see two of the finest of these ships. One was the favorite yacht of Queen Aase, a lady whose luxurious leanings are inferred from her furnishings: three feather beds with down quilts and pillows, and decks covered with fine carpets—although at the time of her death and for centuries thereafter, the fine ladies of



asthmatic...but symptom-free Prophylactic use of Tedral helps your bronchial asthma patients breathe normally—live actively—avoid the fear and embarrassment of disabling attacks. 1 or 2 Tedral tablets q.4.h. provide up to 4 hours' freedom from congestion and constriction. Or therapeutically, when stress brings symptomatic flare-ups, prescribe 1 Tedral tablet at the *first* sign of attack.

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Norway's western fjords loom large in the over-all geography of the country. From Stavanger in the south to Kristiansund in the north is a distance of 300 miles, and here the fjords penetrate into the mainland to a depth of more than 100 miles. The word "penetration" suggests that the sea created the fjords, but in fact all the sea has done is to fill the tremendous ravines which the ice thousands of years ago carved out of the rock. West Norway's fjords are, in other words, submerged valleys filled with the warm salt water from the Gulf Stream. Some are wide and majestic, others are rough and narrow canyons where nature's primeval spirit still seems to lurk. Mountains and valleys and glittering glaciers fill the spaces between the fjords, but it is the awesome fjords themselves which give West Norway its specific, distinctive character.

other countries trod upon crude rush mattings which were seldom cleaned.

These are some of the things visitors to Norway this summer will see. One large group of visitors will be made up of passengers aboard the Cunard Liner *Caronia*, which leaves on a North Cape cruise at the end of June.

In addition to Trondheim, the Caronia will

put in at Stavanger, mooring alongside a seaworthy Vilking longship replica. On board, cruise members may explore decks exactly like those of ships which dominated the waters of the Medieval World. And for those seeking absolute authenticity, drinking horns of mead will be passed around, guaranteed to convey the full flavor of the Viking spirit.

Travel Notes

A roundup of travel and vacation news of current interest

• A luxury European tour for "someone who has everything" has been arranged by Trans World Airlines and Lanseair—a 25-day journey by TWA SuperJet and Rolls-Royce to England, Scandanavia, Russia, Poland, Czechoslovakia and Germany. After arrival from the United States, the motor tour leaves London on June 28, July 12, August 2 or September 6. The Rolls-Royce limousines are driven by an experienced, multilingual chauffeur-guide. During the 12 days spent touring Russia the tour is also accompanied by an Intourist representative. Information about the tour can be obtained at any TWA office or authorized travel agent. Using economy fare the total cost of this tour is \$2,079; by first class jet New YorkLondon and return Frankfurt-New York the total cost is \$2,419.00.

• New 1960 editions of the Florida Vacation Guide and Florida Boating are now available. The 99-page Guide is a comprehensive listing of the state's nine vacation areas and takes the visitor step by step—with sectional maps, attractions and color photography—through nearly every city and town. Information on the state's climate, what to wear, lodging, fishing, hunting and state parks also will be found in the booklet, in addition to Florida sources to which potential visitors may write for additional information. Boatmen planning a cruise of Florida's Intracoastal Waterway or

three-way comparative study demonstrates "full-healing effect" of HYDRO-TAR in acute & chronic dermatoses A CASE IN POINT—ATOPIC DERMATITIS OF BOTH HANDS



Hydrocortisone alone suppresses inflammation.
 Coal tar alone corrects
eczematous manifestations.
 Both agents combined in HYDRO-TAR speed
complete early healing. Mutually supportive action produces the "full-healing"
effect. Presence of hydrocortisone permits well-tolerated coal-tar therapy even
during the acute phases of severe dermatoses.

Dosage: Apply by gentle massage to affected areas 3 or 4 times a day; 0.5% for moderately severe dermatoses or maintenance -1.0% for severe dermatoses.

 $Supplied\colon 15$ Gm. tubes in 0.5% and 1.0% strengths. Samples and literature sent on request.

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of medium soft consistency of sufficient bulk,3 especially if the indigestible portion of that bulk consists primarily of hemicellulose.4 To provide smooth bulk -L. A. Formula—effective, palatable, economical.

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- 20:149, 1952.



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TRAVEL

navigating inland routes will find the 61-page Florida Boating booklet helpful. The booklets can be obtained by writing the Florida Development Commission, Tallahassee, Florida.

- Almost every weekend of the year one of Britain's great auto racing tracks is thundering and shuddering with mighty cars which hurtle around sharp corners at break-neck speed. Both sports car rallies and racing meets take place on the eight major racing tracks. They are all within a day's travel from London. The principal ones include Aintree, Brands Hatch, Crystal Palace, Goodwood, Mallory Park, Oulton Park, Silverstone and Snetterton, according to the British Travel Association.
- Garden enthusiasts will want to see The Floriade in Rotterdam, Holland, a huge exhibition of flowers from around the world, gardens and landscaping. The show will run for six months, from March through September, and will feature many special exhibits, such as flowers and plants from the Bible and flowers associated with royal dynasties.
- Port of Spain continues to grow in importance as an international air crossroads. The first direct link between Bogota, Colombia, and Trinidad is now provided by BOAC - a new convenience for Americans circling the Spanish Main. Britannias make the Bogota-Port of Spain flight every

Saturday, and the Port of Spain-Bogota hop on Fridays. There is a 45 minute stopover in Caracas in each direction. Varig Airlines now operates Caravelle jets twice-weekly between Port of Spain and New York. The deluxe flight, which originates in Rio de Janeiro, is limited to only 40 passengers. Inter-island connections have been improved with the inauguration of service by Leeward Islands Air Transport between Trinidad, Barbados and the Leeward-Windward Islands. A trim DeHavilland Heron maintains the schedule, with reduced rates now in effect.



NO SPRAIN, NO STRAIN, OR LOW BACK PAIN can resist the rapid relaxant relief of

RELA

CARISOPRODOL

RELA—SCHERING'S MYOGESICX RELAXES MUSCLE TENSION FOR MORE ADEPT MANAGEMENT OF BOTH SPASM AND ITS PAIN

Rela is most useful in the areas where narcotic analgesics are unwarranted and where salicylates are inadequate. Its muscle-relaxant properties are dependable yet significantly free of the limitations or problems often associated with other relaxants.





Calendar of Meetings

A listing of important national and international medical conferences

JULY

Stockholm, Sweden. International Congress Against Alcoholism, July 31-Aug. 5. *Contact:* Dr. Archer Tongue, Case Gare 49, Lausanna, Switzerland.

London, England. International Conference on Goiter, July 6-8. *Contact:* Dr. John C. McClintock, 149½ Washington Ave., Albany, N. Y.

New York, N. Y. International Congress on Occupational Health, July 25-29. *Contact:* Dr. Leo Wade, 15 West 51st St., New York, N. Y.

Bahia, Brazil. Pan-American Tuberculosis Congress, July 10-14. *Contact:* Prof. Fernando D. Gomez, 26 de Marzo, 1065, Montevideo, Uruguay.

AUGUST

Basle, Switzerland. International Congress of Internal Medicine, Aug. 24-27. Contact: Secretariat, Sixth International Congress for Internal Medicine, 13, Steinentorstre, Basle, Switzerland.

Rio de Janeiro, Brazil. Interamerican Congress of Cardiology, Aug. 14-20. *Contact:* Dr. Hugo Alqueres, P.O. Box 1594, Rio de Janeiro, Brazil.

SEPTEMBER

West Berlin. World Medical Association, Sept. 15-22. Contact: Dr. Louis H. Bauer, 10 Columbus Circle, New York 19, N. Y.

Honolulu, Hawaii. Pan-Pacific Surgical Association, Sept. 28-October 5. *Contact:* Dr. F. J. Pinkerton, Suite 230, Alexander Young Building, Honolulu 13, Hawaii.

Tokyo, Japan. International Society of Hematology, Sept. 4-10. *Contact:* Dr. James L. Tullis, Suite 6D, 1180 Beacon St., Brookline 46, Mass.

Tokyo, Japan. International Society of Blood Transfusion, Sept. 12-15. *Contact:* Dr. Seizo Murakami, Blood Transfusion Research Laboratory, Japanese Red Cross Society, Shibuya, Tokyo.

Bonn, Germany. Congress of International Society of Audiology, Sept. 28-Oct. 1. *Contact:* General Secretary, 4, Rue Montvert, Lyon, France.

NOVEMBER

Nassau, Bahamas. Bahamas Medical Conference, Nov. 25-Dec. 16. *Contact:* Dr. B. L. Frank, P.O. Box 4037, Fort Lauderdale, Fla.

repeatedly, clinicians report... effective results against staphylococci

CHLOROMYCETIN

IN VITRO SENSITIVITY OF STAPHYLOCOCCUS AUREUS
TO CHLOROMYCETIN AND TO THREE OTHER ANTIBIOTICS*

60% ANTIBIOTIC A

45% ANTIBIOTIC B

Staphylococcus aureus, coagulase-positive, was isolated in pure culture from 99 of 100 consecutive cases of puerperal breast abscess requiring surgical treatment.

Adapted from Knight & Nolan.4

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

CHLOROMYCETIN is a potent therapeutic agent and, because certain blood dyscrasias have been associated with its administration, it should not be used indiscriminately or for minor infections. Furthermore, as with certain other drugs, adequate blood studies should be made when the patient requires prolonged or intermittent therapy.

References: (1) Finland, M.; Jones, W. E., Jr., & Bennett, I. L., Jr.: Arch. Int. Med. 104:305, 1959. (2) Welch, H., in Welch, H., & Finland M.: Antibiotic Therapy for Staphylococcal Diseases, New York, Medical Encyclopedia, Inc., 1959, pp. 14, 16. (3) Nichols, D. R., & Martin, W. J.: Surg. Gynec. & Obst. 107:523, 1958. (4) Knight, I. C. S., & Nolan, B.: Brit. M. J. 1:1224, 1959.

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PARKE-DAVIS



MODERN THERAPEUTICS

New therapies and significant clinical investigations abstracted from other journals.

New Treatment of **Upper Respiratory Infections**

The authors point out the apparent inability of many antibiotics and chemotherapeutic agents to prove of remedial value in upper respiratory infections, with the possible exception of those caused by the large-sized viruses. They believe nasal medication should be predicated on the cellular structure and function of the nose. Secretions in the nasal passages form a mucous film on the surface of the cilia, which is irritated and increased by bacteria or other foreign material. Treatment should initiate proper drainage, aided by reduction of the viscosity of the secretions, and promote adequate aeration. Of numerous agents tested, trypsin was found to be effective in reducing viscosity and to possess anti-inflammatory properties: phenylephrine has been fully evaluated and found to be effective and safe as a vasoconstrictor. Trypp nose drops, containing these two agents, was considered to be a new and physiologic approach to nasal medication. A study was conducted, using more than 200 infants and children with upper respiratory infections or acute exacerbations of chronic sinusitis. Dosage was graduated between one drop of Trypp nose drops in each nostril three to four times a day for infants to three to four drops in each nostril four times a day for children over 12 years of age. Results were excellent in 87 percent of the group; good in 11 percent, and poor in 2 percent. There were

no allergic reactions to the medication, no evidence of rebound phenomena, and no toxic effects.

> ANTHONY J. MAFFIA, M.D. et al. Archives of Pediatrics (1960) Pp. 28-32

Relief of Muscle Spasm

The need for drugs to supply muscle relaxation is constant, and many agents for the purpose have been introduced. The first of these drugs to manifest significant muscle-relaxant action with oral administration was zoxazolamine. In this report, the authors state that it appeared to be the most effective member of the group for the treatment of striated muscle spasm due to causes other than disease of the central nervous system. However, side-effects reduced the clinical usefulness of the drug, until a synthesized analogue of zoxazolamine by the name of chlorzoxazone (Paraflex) was made available. This agent is rapidly absorbed from the gastrointestinal tract, peak plasma levels being reached in one to three hours, while a significant concentration is maintained for six hours or more. Since the greatest effectiveness of chlorzoxazone is in skeletal muscle spasm arising from orthopedic and arthritic disorders, it was found desirable to prescribe acetaminophen for added relief of pain and, in some instances, one of the corticosteroids for an antiinflammatory effect. Accordingly, Parafon, and

Continued on page 182a

EFFECTIVE THERAPY FOR TINEA PEDIS (ATHLETE'S FOOT) AND OTHER RINGWORM INFECTIONS

ORAL ANTIFUNGAL AGENT



Before treatment, T. rubrum infection.



After 2 months' treatment with GRIFULVIN.

typical response of tinea pedis to GRIFULVIN®

- · itching and burning relieved in 2 to 6 days
- vesicles and scaly patches disappear completely; cultures and KOH scrapings usually become negative in 2 to 6 weeks
- · side effects are rare, mild and transitory

Average dose: 250 mg. q.i.d. Adjunctive treatment with topical keratolytic agents will aid in eradicating the fungi from the skin of the feet.

Supplied: 250 mg. scored tablets, colored aquamarine, imprinted McNEIL, bottles of 16 and 100.

Blank, H.; Smith, J. G., Jr.; Roth, F. J., Jr., and Zaias, N.: J.A.M.A. 171:2168 (Dec. 19) 1959. Photographs courtesy of Hervey Blank, M.D., Miami, Florida

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while they are planning their family

they need your help more than ever



the most widely prescribed contraceptive

WHENEVER A DIAPHRAGM IS INDICATED

Parafon with prednisolone were made available, and administered to 62 patients: 44 were given Parafon with prednisolone, while the others received Parafon alone. Results were tabulated according to the degree of clinical improvement manifested by relief of pain, reduction of spasm, and increase in range of motion. In this study, the authors found that of the group who received Parafon with prednisolone, 55 percent showed an excellent result, and in 27 percent the result was good. In the group receiving Parafon alone, 50 percent obtained an excellent result, and 33 percent obtained a good result. Further, no patient complained of sideeffects, nor were any adverse changes revealed by laboratory tests. These results indicate that chlorzoxazone, either alone or in the combination studied, is a potent skeletal muscle relaxant. The beneficial effect is frequently manifested within an hour of administration, and the effect of a single dose lasts about six hours.

EDWARD SETTEL, M.D. Clinical Medicine (1959), Vol. 6, No. 8, P. 1373.

A New Hypoglycemic Agent

Phenethylbiguanide (DBI) has been demonstrated as being an effective hypoglycemic agent with an absence of toxicity. In the authors' study of the drug's action, it was their wish to determine its capacity to reduce glycosuria and hyperglycemia; to investigate dosage regulation; to check side-effects, and to watch for evidence of tissue injury. During a 24-month period, 206 unselected diabetic patients were given DBI alone or together with insulin. The initial daily dose, frequently divided, was 50 mg. of DBI. If there had been good control with insulin, it was very gradually decreased in amount, while the amount of DBI was increased to 150 mg. daily. Of the group, 110 patients were treated successfully with DBI alone, in 18 patients the successful treatment consisted of DBI and an insulin dosage that had been reduced 50 percent. That phenethylbiguanide is

Continued on page 184a

RONCOVITE°-MF IS RAPIDLY BECOMING THE DRUG OF CHOICE IN ANTI-ANEMIA THERAPY...

because...

Cobalt is the only known clinically proved therapeutic agent which enhances the formation of erythropoietin, the hormone which regulates erythropoiesis in the body.

because...

Roncovite through the effect of Cobalt-enhanced erythropoietin improves iron utilization by activating this normal physiologic process.

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The result is a more rapid and complete hematologic response in the anemic patient . . .

and because...

The safety of Roncovite has been demonstrated by the administration of over 365 million doses.

Please write for monograph,
"The Hormone Erythropoietin."
Roncovite literature also
available on request.

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EACH ENTERIC COATED, GREEN TABLET CONTAINS:

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clinically useful is clearly indicated. The dosage must be personalized. The authors state that by the use of DBI, insulin therapy can be omitted in milder cases of diabetes, while a combination of the agents allows better control of more severe cases. There is no evidence that the action of DBI is cumulative, but it is not unusual for several days to elapse before a significant therapeutic response is evident. Gastrointestinal side-effects alone appear to limit the broad clinical utility of DBI. It is the opinion of the authors that these are inherent in the drug when proper individual dosage is exceeded, and may serve as a useful dose regulator and perhaps a safety device. Patients with previous gastrointestinal complaints, anxiety, or depression, and those with autonomic nervous system instability are especially prone to complain of side-effects, and should be carefully watched: in some instances, DBI may not be the determining factor. The report concludes with a mention that no organ toxicity has been observed in any patient even though



"I think she's coming out of the anesthetic . . . "

DBI has been administered for periods up to two years.

JULIUS POMERANZE, M.D. ET AL. J.A.M.A. (1959), Vol. 171, No. 3, P. 252

Fibrinolysin (Plasmin) Therapy in Acute Deep Thrombophlebitis

All aspects of deep thrombophlebitis of the lower extremities and its treatment have been subjected to extensive controversy. Recently the complex therapeutic picture has been further expanded to include agents known as fibrinolytic or thrombolytic, which are capable of dissolving intravascular clots. It is believed that an ideal therapeutic regimen for this type of disorder would: (1) provide rapid relief of acute signs and symptoms with early return of the patient to normal activity; (2) prevent pulmonary embolism; (3) prevent permanent residuals such as the post-phlebitic syndrome, and (4) prevent phlebitic recurrence. Two groups of patients were studied: 30 patients were given anticoagulant drugs, and 32 were given anticoagulant drugs plus intravenous fibrinolysin. Only patients were considered in whom unequivocal signs and symptoms of acute deep venous occlusion of the lower extremities had been present for ten days or less. In the control group (those who did not receive fibrinolytic therapy), patients were given heparin in a dosage of 75-100 mg. subcutaneously every six hours, with a coumarin-type drug usually administered simultaneously. Heparin was continued until the patient had remained in a 10-30 percent one-stage prothrombin time range for at least 24 hours. The same therapeutic regimen was followed with the second group, but with the addition of an intravenous infusion of 75-100,000 units of fibrinolysin over a three-to-four-hour period. A second dose was administered on the following day if symptoms persisted. During therapy and at its conclusion, all phases and reactions as well as long-and short-term results were carefully

Continued on page 186a

'B. W. & CO.'" ANTIBIOTIC LOTIONS FOR TOPICAL BACTERIAL INFECTIONS

Antibiotics

- Of proven effectiveness
- That rarely sensitize
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BACTERICIDAL ANTI-INFLAMMATORY

CORTISPORIN'®

Each cc. contains:
"Aerosporin"
brand Polymyxin B Sulfate
10,000 Units
Neomycin Sulfate...5 mg.
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in a special
water-miscible lotion
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Each cc, contains:

"Aerosporin'® brand Polymyxin B Sulfate 10,000 Units
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The assurance of proven formulas—
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pHisoHex, containing 3 per cent hexachlorophene, provides continuous antibacterial action against infection for patients with acne. Much more effective than soap in cleansing, it deposits hexachlorophene ". . . as a semi-permanent film on the skin of frequent users." When the regular use of pHisoHex was added to the standard treatment for acne, "no patient failed to improve."

augments therapy with excellent results

1. Smylie, H. G.; Webster, C. U., and Bruce, M. L.: Brit. M. J. 2:606, Oct. 3, 1959. 2. Hodges, F. T.: GP 14:86, Nov., 1956.

Uinthrop LABORATORIES
New York 18, N.

evaluated. Untoward effects from the administration of fibrinolysin do not appear to produce a higher incidence of febrile or other reactions in patients with bronchial asthma, hay fever and various "collagen" disorders, although the use of plasmin in subjects with rheumatoid arthritis should be approached with caution. From the study, it appears that the addition of fibrinolysin to the therapeutic regimen leads to more rapid clearing of the acute phlebitic episode, and may diminish the shortterm incidence of phlebitic recurrence and pulmonary embolization. Greater short-term differences in therapeutic response appeared to exist between the two groups when analyses were restricted to patients treated within five days of phlebitic onset.

KENNETH M. MOSER, M.D., et al. Circulation (1960) Vol. 21, P. 337

Bronchial Asthma Treated with Triamcinolone

The antiallergic effects of triamcinolone were studied when the drug was administered to 50 patients suffering from chronic intractable bronchial asthma. The duration of therapy was from one to nine months. The authors state that in all cases, other therapy had failed to afford symptomatic relief. For the most part, the members of the group had been afflicted with the condition for years. Triamcinolone was used as a supplement to other forms of symptomatic, local, or immunologic therapy. If the patient had been given steroids, they were discontinued. The dose varied from 1 to 16 mg. daily in divided doses. The average initial dose was 6 to 8 mg., and the average maintenance dose was 2 to 4 mg. Patients were watched carefully by frequent physical and laboratory examinations. A small percentage of the patients experienced side-effects, but they were mild and did not necessitate decreasing or stopping the administration of the drug. The authors state that all members of the group

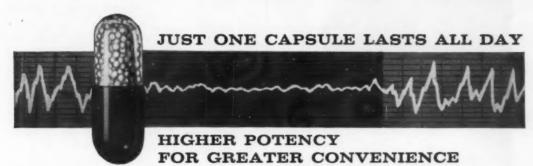
Continued on page 188a

NEW AND EXCLUSIVE

FOR SUSTAINED TRANQUILIZATION

MILTOWN (meprobamate) now available in 400 mg. continuous release capsules as

Meprospan-400



- relieves both mental and muscular tension without causing depression
- · does not impair mental efficiency, motor control, or normal behavior

Usual dosage: One capsule at breakfast, one capsule with evening meal

Available: Meprospan-400, each blue capsule contains 400 mg. Miltown (meprobamate) Meprospan-200, each yellow capsule contains 200 mg. Miltown (meprobamate)

Both potencies in bottles of 30.

*WALLACE LABORATORIES, New Brunswick, N. J.



were benefited by triamcinolone: 50 per cent had an excellent response; 40 per cent had good results, and in eight per cent the results were fair. Those patients having had the best results required only 1 to 4 mg. daily as a maintenance dose. In all cases, the effort was made to keep the dose at the minimum at which the patient was satisfied with the degree of relief obtained. The authors conclude that when patients had been seeking relief over extended periods, the dramatic improvement following the administration of triamcinolone gave them a new and brighter outlook. Also, the drug appears to be very useful in the management of chronic intractable bronchial asthma, largely because of the satisfactory symptomatic relief obtained with comparatively small doses.

LOUIS LEVIN, M.D. and

EMANUEL SCHWARTZ, M.D.

N. Y. S. J. of Med. (1959), Vol. 59, No. 14, P. 2710

Compulsive Water Drinking

"1. Seven women and two men with compulsive water drinking are described; their ages ranged from 48 to 59 years, except for one patient aged 24.

2. There was a history of previous psychological disorder in eight of the nine patients, including hysteria, delusional hypochondriasis, and depression; the observed psychological disturbances ranged from delusions, depression, and agitation, to frank hysterical behavior; one patient appeared normal.

3. The consumption of water fluctuated irregularly from hour to hour or from day to day; in some patients there were remissions and relapses lasting several months or longer.

4. The mean plasma osmolality in eight compulsive water drinkers was significantly lower than normal; in 12 patients with diabetes insipidus it was significantly higher.

5. The ability to concentrate the urine after intravenous vasopressin varied considerably, and in some patients it was severely impaired;

Continued on page 190a



IN CHRONIC BRONCHITIS. CHRONIC ASTHMA AND EMPHYSEMA . . . BUILD YOUR PROPHYLACTIC

BETTERS BREATHING . . . FORESTALLS THE CRISIS

Choledyl, the choline salt of theophylline, improves Choledyl, the choine salt of theophylime, improves pulmonary function, betters breathing, forestalls the crisis, is basic in any prophylactic regimen. A pure bronchodilator, Choledyl is free of sedative and sympathomimetic effects...produces higher theophylline blood levels than does oral aminophylline...is not likely to cause gastric irritation or drug fastness... is excellent for long-term use. Usual adult dose: 200 mg. q.i.d.

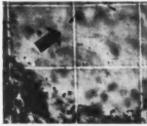


TWO STUDIES-ONE CONCLUSION:

Immolin VAGINAL CREAM-JEL

offers simple, effective conception control— without an occlusive device

Works on new principle to inhibit sperm migration



TRAPPED—This highly motile, viable sperm becomes nonreproductive the instant it contacts the outer edge of the IMMOLIN Cream-Jel matrix.



KILLED AND BURIED—The dead sperm is trapped deep in the IMMOLIN Cream-Jel matrix.

Study 1. Pregnancy rate: 2.01 per hundred woman-years of exposure

In a 28-month study totaling 1792 patient-months, Dr. Leopold Z. Goldstein' found that of 101 young, married, fertile women who relied exclusively on IMMOLIN Cream-Jel, only 3 unplanned pregnancies occurred — just 2.01 per hundred woman-years of exposure.

Study 2. Pregnancy rate: 3.2 per hundred woman-years of exposure

A pregnancy rate of 3.2 woman-years of exposure is now reported by Drs. Ruth Finkelstein and Raymond B. Goldberg² in a study of 176 women who for three years relied exclusively on IMMOLIN Cream-Jel, a period totaling 3354 patient-months.

IMMOLIN combines advantages of cream and jelly

Snowy white, dry, static and free of messiness, IMMOLIN Cream-Jel combines the soft, pleasant emollience of a cream with the smoothness of a jelly, yet minimizes overlubrication and leakage—increases motivation to use faithfully.

HOW SUPPLIED: #900 Package — 75 gram tube with improved measured-dose applicator and attractive, zippered plastic case. #905 Package — 75 gram tube only.

Goldstein, L. Z.: Obst. & Gynec. 19:133 (Aug.) 1957.
 Finkelstein, R., and Goldberg, R. B.: Am. J. Obst. & Gynec. 78:657 (Sept.) 1959.
 IMMOLIN is a registered trade-mark of Julius Schmid, Inc.

JULIUS SCHMID, INC., 423 West 55th Street, New York 19, N.Y.

this defect was unrelated to the urine output (5 to 20 litres in 24 hours) or the plasma osmolality.

- 6. The urine concentration after fluid deprivation suggested that six patients were able to secrete ADH normally, but that in two the ability to secrete ADH was impaired. After a remission of the compulsive water drinking these two patients had a normal response to fluid deprivation.
- Vasopressin tannate in oil made most patients feel ill; in one it caused acute overhydration.
- 8. In four patients the fluid intake returned to normal after electroconvulsive therapy or a period of continuous narcosis; the improvement in three was transient, but in the fourth it has lasted two years.
- 9. Compulsive water drinking was distinguished from diabetes insipidus by the clinical history and mental state of the patient, and by a fluid deprivation test performed after the kidney's ability to respond to administered vasopressin had been established; an estimation of plasma osmolality, and the general effects

produced by an injection of vasopressin tannate in oil, were also found useful."

E. D. BARLOW and H. E. DE WARDENER

The Quarterly J. of Med. (1959)

Vol. XXVIII, No. 110, P. 257

Benzomethamine Chloride

A large number of anticholinergic drugs have been made available for the treatment of gastrointestinal diseases, but the effects are not consistent, and undesirable side-effects are frequent. A new cholinergic blocking agent, benzomethamine chloride (Cotranul), has recently been studied clinically. Its purpose is the suppression of excessive gastric secretion and gastrointestinal motility. It is absorbed from the intestinal tract, and excreted by the kidneys. In observing the response to Cotranul, two groups of patients were included: one consisted of patients hospitalized for gastrointestinal and other ailments; they were studied for gastric secretion. A second group were outpatients with known gastrointestinal disorders. The clinical trials revealed to the authors that Cotranul is effective in the treatment of peptic ulcer, and caused relatively few sideeffects, none of which required withdrawal of the drug or decrease in the recommended dosage of 50-100 mg. q. i. d. It is possible that patients who show resistance to the drug could be benefited by the addition of a mild sedative. Theoretically, an effective anticholinergic drug could be expected to relieve patients afflicted with esophagitis secondary to hiatus hernia by decreasing the acidity and volume of the fluid that bathes the lower end of the esophagus. Three patients in the series with that diagnosis were benefited. Also of importance is the beneficial effect of Cotranul on functional cases commonly designated as spastic or irritable colon.

STANLEY STARK, M.D. ET AL. Am. J. of Gastroen. (1959), Vol. 31, No. 2, P. 219

Continued on page 192a



preferred for the treatment table because

helps clear topical infections promptly

Neo-Polycin® provides neomycin, bacitracin and polymyxin, the three antibiotics preferred for topical use because these agents are rarely used systemically. This combination is effective against the *entire* range of bacteria causing most topical infections...has a low index of sensitivity...and does not interfere with wound healing. And Neo-Polycin provides these three antibiotics in the unique Fuzene® base, which releases a higher concentration of antibiotics than is possible with grease-base ointments.

Each gram of Neo-Polycin contains 3 mg. of neomycin, 400 units of zinc bacitracin and 8000 units of polymyxin B sulfate in the unique Fuzene base. Supplied in 15 Gm. tubes.

PITMAN-MOORE COMPANY
DIVISION OF ALLIED LABORATORIES, INC., INDIANAPOLIS 8, INDIANA

Osmole and Water Excretion in Congestive Heart Failure

"Mercurial diuresis in patients with congestive heart failure has the characteristics of a simple osmotic diuresis in that there is a linear relationship, with a slope of unity, between osmolal clearance and urine flow rate. The implication of this relationship is that the ratio of water-to-solute loss during such a diuresis depends on the capability for free water reabsorption and the urine flow rate.

Variations in mercurial effect are shown to correlate with endogenous creatinine clearance and are like those observed in normal subjects given mercurials without previous administration of a salt or water load.

Variations in free water reabsorption are shown to relate significantly to endogenous creatinine clearance in 3 of 4 patients. No correlation between free water reabsorption and other parameters such as plasma osmolality, the phase of diuretic effect, or urine flow rate could be demonstrated.

Evidence is presented to confirm the previous finding that the patient with congestive heart failure deprived of water for 12 hours is under maximal antidiuretic effect."

NORTON SPRITZ, GEORGE W. FRIMPTER, WARREN S. BRAVEMAN, ALBERT L. RUBIN Circulation (1959) Vol. XIX, No. 4, P. 604



Prednisone Therapy for Letterer-Siwe Disease

No disease presents greater problems of classification than reticuloendotheliosis. It is now generally accepted that Schueller-Christian disease, Letterer-Siwe disease, and eosinophilic granuloma are all manifestations of reticuloendotheliosis. Letterer-Siwe disease tends to involve several systems and is usually considered to be a progressive and fatal disease of the first two years of life, characterized by hepatosplenomegaly, generalized lymphadenopathy, rash, anemia, and intermittent fever. The author's case is that of a boy who showed eczematous-seborrheic lesions at less than two weeks of age. Lesions continued to appear at various locations, and were believed characteristic of Letterer-Siwe disease. X-rays revealed multiple lesions of the jaws, left and right femur, and skull. Exophthalmos became marked. There was a thick sanguinopurulent discharge from both ears. At slightly over two years of age, when seen at a clinic, he had had several bouts of fever, his skull was enlarging at the temples, he spoke only one or two words, cried much of the time, and his balance in walking was very unsteady. Prednisone therapy was begun in doses of 2.5 mg. four times daily. After one week this was decreased to 2.5 mg. three times daily, and one week later was reduced to 2.5 mg. twice a day. The author stated that within a short period, the discharge ceased, there were no further elevations of temperature, appetite, and vocabulary were improved, he was able to run about freely, and his disposition underwent a marked change for the better. When prednisone administration was reduced to 2.5 mg. daily, many of his earlier symptoms returned, but these promptly ceased when the prednisone dosage was raised to 5 mg. twice a day. He has since been maintained on 1 mg. three times a day for four days each week.

> MARGARET PROUTY, M.D. J. A. M. A. (1959), Vol. 169, No. 16, P. 1877 Continued on page 194a



with a one week course of daily injections

Anergex-1 ml. daily for 6-8 days-usually provides prompt relief that persists for months.

Anergex—a specially prepared botanical extract—is nonspecific in action; it suppresses allergic manifestations regardless of the offending allergens. It is not a histamine antagonist, nor does it merely minimize the effects of a single allergen.

Anergex eliminates skin testing, long drawn-out desensitization procedures, and special diets. It has been effective even in patients who failed to respond to other therapeutic measures.

Reports on over 3,000 patients have shown that over 70% derived marked benefit or complete relief following a single short course of Anergex injections. Effective in seasonal and nonseasonal rhinitis (pollens, dust, dander, molds, foods); allergic asthma: asthmatic bronchitis and eczema in children: food sensitivities.

Available: Vials containing 8 ml.—one average treatment course.

WRITE FOR REPRINTS AND LITERATURE

ANERGEX

the new concept for the treatment of allergic diseases

MULFORD COLLOID LABORATORIES MULFORD PHILADELPHIA 4, PENNSYLVANIA



Unique benefit of APRESOLINE® helps reverse advancing hypertension

Apresoline contributes an exclusive action to the antihypertensive program: It is the only therapeutically acceptable agent to increase renal blood flow and relax cerebral vascular tone while it lowers blood pressure. With improved kidney function, advancing hypertension can often be halted—or even reversed.

Apresoline is indicated for moderate to severe and malignant hypertension, renal hypertension, acute glomerulone-phritis, and toxemia of pregnancy.

When less potent drugs are not fully effective, when renal function must be improved, Apresoline is a logical prescription. Except in rare instances side effects are not a serious problem when the recommended maximal daily dosage (400 mg.) is not exceeded.

Rx APRESOLINE®-ESIDRIX® for potentiated antihypertensive effect in advancing hypertension

SUPPLIED: APRESOLINE <u>Tablets</u>, 10 mg., 25 mg., 50 mg. APRESOLINE-ESIDRIX <u>Tablets</u>, each containing 25 mg. Apresoline hydrochloride and 15 mg. Esidrix.

APRESOLINE® hydrochloride (hydralazine hydrochloride ciaa). APRESOLINE® hydrochloride Esiphix® (hydralazine hydrochloride and hydrochlorothiazide ciaa). 2/2007/80



Respiratory Allergies Treated with Parabromdylamine Maleate

The authors begin by stating that parabromdylamine maleate (Dimetane) has been shown to have a high histamine antagonistic action with extremely low toxicity as compared with other extensively used antihistaminic preparations. The drug was employed by the authors as an adjunct in treating 270 private and clinic patients suffering from respiratory allergies.

Only patients who did not have a very satisfactory result with elimination of known allergens or with hyposensitization injections alone were chosen for the study which was conducted through the period that encompassed the tree, grass, and ragweed hay fever season of 1958. The patients were encouraged to use the drug not only for symptomatic relief of existing symptoms, but prophylactically in anticipation of high-pollen periods. The recommended dosage was one 4-mg. tablet of parabromdylamine maleate on awakening and then another at 3:00 P.M. One Extentab, a sustained-action 12-mg. tablet was taken at bedtime. For severe symptoms, 4 mg. tablets were taken as often as every four hours. The report stated that ninety-one percent of the patients with respiratory allergies obtained satisfactory relief.

Dimetane has been shown to be most effective in the treatment of hay fever; less satisfactory in relieving the symptoms of perennial allergic rhinitis or vasomotor rhinitis, and considerably less effective when used to treat asthma. Side-effects occurred in 6.3 percent of the patients with respiratory allergies, the most frequent being drowsiness. The authors conclude that by clinical trial, parabromdylamine maleate has been shown to be an outstanding antihistaminic agent for the symptomatic relief of respiratory allergies.

ALBERT M. FUCHS, M.D. and
MURRAY L. MAURER, M.D.
N. Y. S. J. of Med. (1959), Vol. 59, No. 16, P. 3060
Continued on page 196a



When blood pressure must come down

When you see such symptoms of hypertension as dizziness, headache, and fainting, your patient is a candidate for Serpasil-Apresoline. Often when single-drug therapy fails, Serpasil-Apresoline can bring blood pressure down to near-normal levels. In addition, it reduces rapid heart rate, allays anxiety.

SUPPLIED: Tablets #2 (standard-strength, scored), each containing 0.2 mg. Serpasil and 50 mg.

Apresoline hydrochloride; Tablets #1 (half-strength, scored), each containing 0.1 mg. Serpasil and 25 mg. Apresoline hydrochloride.

Rx New SER-AP-ES^{T.M.} to simplify therapy of complicated hypertension

SER-AP-ES Tablets, each containing 1.0 mg. Serpasil, 25 mg. Apresoline, 15 mg. Esidrix. SERPASIL® (reserpine ciba) / APRESOLINE® hydrochloride ciba) / ESIDRIX® (hydrochlorothiazide ciba) 2/2828 MX

SERPASIL-APRESOLINE



MODERN THERAPEUTICS—Continued

focus



new

the first anesthetic hydrocortisone suppository

Rectal Medicone-HC

The original, reliable Rectal Medicone formula with 10 mg. hydrocortisone acetate

for symptomatic control
of severe anorectal
inflammation...pruritus...pain in
hemorrhoids • acute and chronic proctitis
postoperative edema • cryptitis
pruritus ani • postoperative scar tissue

Dosage: Start therapy with 1 RECTAL MEDICONE-HC suppository twice daily for 3 to 6 days — Continue maintenance control against recurring symptoms with regular RECTAL MEDICONE Suppositories and/or Unguent. Samples and literature on request

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Imipramine for Depressed Ambulatory Patients

It is pointed out that a drug dispensed to office patients must possess certain properties which are not essential in the drugs used in a psychiatric hospital. The agent must not necessitate bed rest, constant supervision to watch for side-effects, nor should it require numerous laboratory procedures. In the nonhospitalized, depressed patient, rapid action of the drug is required since he may be unable to retain his job if his depressed state interferes with his working capacity. Also, the patient with a suicidal trend must be relieved quickly of the need for constant supervision. One hundred two office patients were given imipramine (Tofranil). Initially, the patients received 75 mg. of the drug daily in divided doses. The amount was increased if no improvement occurred within three or four days. No other medication was employed, with the exception of pentobarbital used in a few instances at bedtime for insomnia. The diagnoses for the majority of the group were: (1) depressive psychoses, (2) anxiety and compulsive neuroses with depressive features, or (3) paralysis agitans. In judging the results of treatment, the case was listed as a failure if considerable improvement was absent at the end of three weeks. Thirty-six patients suffered from depressive psychoses; 22 of this group had received electroshock treatment, and they were considered to represent an important control group for evaluating the efficacy of imipramine. Eighteen of the 22 patients responded well to imipramine, and four others appeared to although treatment with the drug was received for only one week. Thirteen patients were in the second group with anxiety and compulsive neuroses; the degree of improvement noted fully warranted the use of imipramine. However, patients with hysteria and chronic hypochondriac states failed to show satisfactory reaction. In the patients with paralysis agitans, the tremor and akinesia were unimproved, but, the the author states that the change in the attitude of the patients toward their affliction and toward heir general outlook on life, and their sense of well-being made therapy with imipramine well worthwhile. Side-effects were mild and did not necessitate a reduction in dosage.

HANS STRAUSS, M.D.

N. Y. S. J. of Med. (1959), Vol. 59, No. 15, P. 2900

Sublingual Nitroglycerin on Pulmonary Arterial Pressure

"1. The substernal distress associated with paroxysmal dyspnea of left heart failure is frequently of such severity as to be described by the patient as substernal pain. Our experience indicates that the administration of nitroglycerin (0.6 to 1.2 mg.) subingually is often effective emergency therapy in the relief of this respiratory and retrosternal distress.

2. As a result of these clinical observations a physiologic study using right heart catheterization was made in 13 patients with left heart failure to determine some of the hemodynamic effects of nitroglycerin administration.

3. In 10 of the 13 patients a prompt reduction in the pulmonary hypertension was observed following administration of nitroglycerin. In four cases where we were able to measure pulmonary wedge pressure, a significant fall in wedge pressure was also observed.

4. In 12 cases the total pulmonary resistance fell promptly during the first 15 minutes following nitroglycerin therapy. There was no consistent alteration in the cardiac output, nor was there a significant increase in heart rate.

5. One patient with coronary artery disease developed a typical episode of angina pectoris with radiation into the left arm similar to his well documented previous attacks during the period of control hemodynamic observations. During the height of precordial pain there was a sharp increase in the pulmonary artery pressure, and the pulmonary resistance was found to be greatly elevated. Nitroglycerin administration resulted in a prompt reduction of pulmonary artery pressure, total pulmonary resistance and complete disappearance of anginal pain. The patient had no subsequent complications as a result of this experience.

Continued on the following page

focus On...



in uncomplicated hemorrhoids and anorectal disorders

Rectal Mediconé

SUPPOSITORIES

The original, clinically proven, medically accepted formula is designed to meet all therapeutic considerations in the treatment of simple hemorrhoids and minor anorectal disorders.

First: provides rapid, safe, assured relief from pain, itching and burning...

Then: arrests bleeding • promotes healing contracts hemorrhoidal lesions affords antisepsis soothes and lubricates

Samples and literature on request



Foremost in the field of anesthetic anorectal therapy

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6. The clinical and physiologic data obtained after nitroglycerin administration suggest that this drug has an important place in the management of patients with pulmonary artery hypertension and paroxysmal dyspnea associated with failure of the left ventricle."

JOHN B. JOHNSON, AUDREY FAIRLEY and CLARENCE CARTER Annals of Int. Med. (1959) Vol. 50, No. 1, P. 40.

Bacterial Endocarditis After Surgery for Acquired Heart Disease

"Thirty-eight cases of bacterial endocarditis occurring after cardiotomy for acquired heart disease are reviewed, and 2 additional cases reported, in an effort to summarize the unusual and challenging aspects of this 'new' disease.

Mitral-valve surgery was performed in 23, aortic-valve surgery in 21, and combined aortic-valve and mitral-valve operations in 4

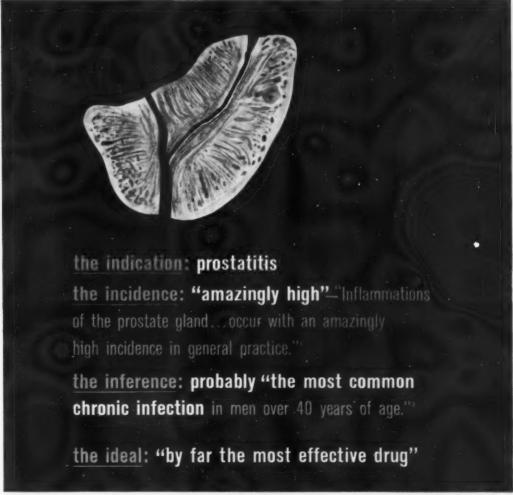
cases. All 21 patients with aortic-valve surgery were males. One patient had exploratory cardiotomy only.

Information regarding antibiotic prophylaxis for rheumatic heart disease and after cardiotomy was not available. Further inquiry along this line might be indicated.

Staphylococcus aureus was the causative organism in 26 cases; 11 were coagulase positive, and 15 coagulase negative. Of the 11 patients with coagulase-positive staphylococci, 6 are living, and 5 dead. Of the 15 with coagulase-negative organisms, 7 are living, and 8 dead. These figures suggest only that the coagulase-negative strains predominate and carry a higher mortality.

There is an impression that cases of bacterial endocarditis developing in the immediate (one to four weeks) postoperative period are related to a demonstrable extracardiac source, as op-





Furadantin

brand of nitrofurantoin

"... by far the most effective drug to be employed, and this has been substantiated in practice. It is a drug of low toxicity and, what is more important, bacteria rarely if ever become resistant to it. It can be employed for long periods of time, is bactericidal and does not favor the appearance of monilial infections."³

Indicated in: acute and chronic prostatitis • benign prostatic hypertrophy (to prevent or treat concomitant infection) • postoperatively in prostatic surgery

Supplied: Tablets, 50 and 100 mg., Oral Suspension, 25 mg. per 5 cc. tsp.

References: 1. Campbell, M. F.: Principles of Urology, Philadelphia, W. B. Saunders Co., 1957. 2. Farman, F., and McDonald, D. F.: Brit. J. Urol. 31:176, 1959. 3. Sanjurjo, L. A.: Med. Clin. N. America 43:1601, 1959.

EATON LABORATORIES, NORWICH, NEW YORK



Proven

in over five years of clinical use and more than 750 published clinical studies

Effective

for relief of anxiety and tension

Outstandingly Safe

- simple dosage schedule produces rapid, reliable tranquilization without unpredictable excitation
- no cumulative effects, thus no need for difficult dosage readjustments
- · does not produce ataxia, change in appetite or libido
- does not produce depression, Parkinson-like symptoms, jaundice or agranulocytosis
- · does not impair mental efficiency or normal behavior



for
the
tense
and
nervous
patient

Despite the introduction in recent years of "new and different" tranquilizers, Miltown continues, quietly and steadfastly, to gain in acceptance. Generically and under the various brand names by which it is distributed, meprobamate (Miltown) is prescribed by the medical profession more than any other tranquilizer in the world.

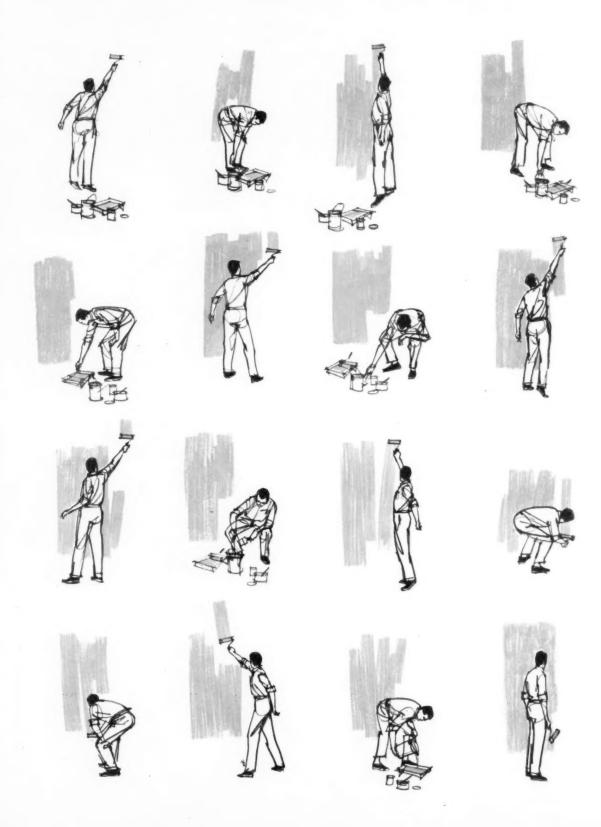
The reasons are not hard to find. Miltown is a *known* drug, evaluated in more than 750 published clinical reports. Its few side effects have been fully reported; there are no surprises in store for either the patient or the physician. It can be relied upon to calm anxiety and tension quickly and predictably.

Usual dosage: One or two 400 mg. tablets t.i.d. Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; or as MEPROTABS*-400 mg. unmarked, coated tablets.

Miltown

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CM-205





when that early Monday morning telephone call is from a weekend do-it-yourselfer

"... and this morning, Doctor, my back is so stiff and sore I can hardly move."

now...there is a way to prompt, dependable relief of back distress

the pain goes while the muscle relaxes

POTENT - rapid relief in acute conditions

SAFE - for prolonged use in chronic conditions

notable safety—extremely low toxicity; no known contraindications; side effects are rare; drowsiness may occur, usually at higher dosages

rapid action, sustained effect -starts to act quickly, relief lasts up to 6 hours

easy to use—usual adult dosage is one 350 mg. tablet 3 times daily and at bedtime

supplied – as 350 mg., white, coated tablets, bottles of 50; also available for pediatric use: 250 mg., orange capsules, bottles of 50





posed to difficulty in demonstrating the source in cases developing in the later post-operative period (longer than four weeks). Further pathological study of the healing process of the surgically traumatized valves appears indicated.

The frequency of postcardiotomy bacterial endocarditis can only be estimated but appears to be well under 1 percent.

Treatment regimens varied greatly; almost all patients received penicillin. Streptomycin, tetracyclines and chloramphenicol were combined with about equal frequency, apparently depending on in vitro sensitivity.

Absolute mortality figures reveal about 35 percent mortality. Some of these undoubtedly do not represent treatment failure but, rather, complications of endocarditis. The corrected mortality, on the basis of available information, would be about 27 percent. Most authors pre-

viously noted a mortality of about 50 percent for staphylococcal endocarditis unrelated to surgery.

No definite correlation between valvular calcification and mortality could be determined. Atrial fibrillation was present in 8 cases.

The clinical picture of bacterial endocarditis after cardiotomy is indeed atypical, and differs from the usual subacute bacterial endocarditis. Fever, often low-grade, and septicemia were the only consistent findings. Changing heart murmurs, pericarditis, splenomegaly, petechiae and embolic phenomena occurred in only a few cases. The difficulties in diagnosis are discussed."

F. G. HOFFMAN, S. L. ZIMMERMAN, E. A. BRADLEY and B. LAPIDUS The N.E.J. of Med. (1959) Vol. 260, No. 4. Pp. 157-58





Twiston, 2 mg./Twiston R-A, 4 mg... "Tailor-made" to keep your patient symptom-free, alert; without drowsiness or toxicity.

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BAD DIGESTION INCLINES ONE TO SKEPTICISM, INCREDULITY, BREEDS BLACK FANCIES AND THOUGHTS OF DEATH JOSEPH CONRAD

When bad digestion is the consequence of digestive enzyme deficiency, Entozyme may dispel dreary symptoms such as pyrosis, flatulence, belching, and nausea, for it is a natural supplement to digestive enzymes. It provides components with digestive enzyme activity: Pepsin, N. F., 250 mg., Pancreatin, N. F., 300 mg., and Bile Salts, 150 mg. Because Entozyme is actually a tablet-within-a-tablet, these components are freed in the physiological areas where they occur naturally. Entozyme has proved useful in relieving many symptoms associated with cholecystitis, post-cholecystectomy syndrome, sub-total gastrectomy, pancreatitis, infectious hepatitis, and a variety of metabolic diseases.

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ENTOZYME



NEWS AND NOTES

Selected items of current interest from the fields of medical research and education

Modern Medical Know-How Could Not Have Saved Lincoln

Could doctors have saved Abraham Lincoln's life 95 years ago with present-day medical knowledge and equipment? The answer is no, according to an article in *Today's Health*.

"Even if Lincoln had been given the best of modern treatment, it is universally admitted that all efforts would have been in vain," Otto Eisenschiml, Litt.D., author of several Lincoln books.

Eisenschiml said the fact that Lincoln survived for about 10 hours after he was shot by John Wilkes Booth in Ford's Theater, Washington, D.C., April 14, 1865, is considered "remarkable." He said it can only be attributed to his extraordinary vitality and the intelligent measures taken by a 23-year-old Army surgeon, Dr. Charles A. Leale.

Dr. Leale was the first physician to reach the wounded President. Finding him unconscious from an obviously severe brain injury, the young doctor tried to revive him by breathing into his mouth and by pouring a small amount of diluted brandy between his lips. A fluttery pulse could then be felt.

The President was taken to a boarding house across the street from the theater where efforts were made to ease the pressure on the brain. Later an unsuccessful probe for the bullet was made although extraction of the bullet was not seriously considered.

Dr. Leale and two other attending physicians

then were forced to conclude that they had done all they could to stay the inevitable end.

Today's physicians would have followed virtualy the same procedure.

"In spite of their vastly improved techniques, they could do little more than had been done by the medical men almost a century ago," Dr. Eisenschiml said.

"But if by some miracle Lincoln's life had continued, he would have been totally blind, at least partially paralyzed, subject to meningitis and epilepsy . . .

"All in all, the martyred President himself undoubtedly would have preferred to die rather than become the hopeless wreck and object of pity which he would have been, had he lived on."

Dr. Bogen to Visit India

Dr. Emil Bogen is retiring as Head Pathologist and Director of Laboratories and Research at the Olive View Sanatorium, the tuberculosis sanatorium of Los Angeles County, where he has served since 1929. He was awarded an appointment on the Fulbright Mundt Educational Exchange Program to lecture and carry on research on unusual acid-fast bacilli at the University of Delhi, India. His wife, Dr. Jane Skillen, is retiring as a head physician at the Olive View Sanatorium, and will accompany him to India.

Continued on page 206a



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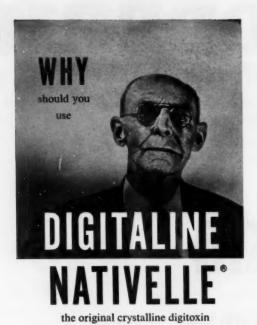
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Medical Secrecy in the Law

- "1. A doctor must take care not to give a third party a certificate as to the patient's condition if he can reasonably foresee that it might come to the patient's knowledge and cause him physical harm.
- 2. The rule is not absolute and depends on circumstances. Take the case of a doctor who discovers that his patient entertains delusions in respect of another, and in his disordered state of mind is liable at any moment to cause death or grievous bodily harm to that other. Perhaps the public interest requires him to report that finding to someone. Take the case of a patient of very tender years or of unsound mind. Common sense and reason demand that some report on such a patient should be made to the patient's parent or other person having control of him. But public interest requires that care should be exercised in deciding what shall be reported and to whom. Publication or communication of the report to other than appropriate persons could still be a breach of the duty owed by the doctor if the patient thereby suffers unnecessary physical harm. In certain circumstances the issue of a certificate might have resulted to the benefit of the patient. Indeed, that was Dr. Fitchett's own contention. He thought that as a result of it Mrs. Furness would not be committed to a mental institution without prior examination by a specialist in psychiatry.
- 3. The doctor can cover himself to some extent in a jury's eyes by marking the certificate 'confidential,' supposing always, of course, that it is given to an appropriate person and for good cause.
- 4. The doctor's duty not to disclose is much less strong when the certificate is given a public authority, which has perhaps some shadow of right to the disclosure, than it is when given to a husband, wife relative who might leave it about or show it. There must, however, be good cause for the disclosure, and it must be made in the interests of the patient rather than in the public interest.

5. A doctor may owe a duty of care not to disclose directly to the patient, if he foresees the latter may suffer physical injury in consequence. This is a very delicate principle considered in the abstract and divorced from concrete instances. A doctor will have to exercise discretion.

Finally, it should be emphasized that the doctor's primary responsibility is to the patient, and the law invades this principle only to the extent to which society requires the patient's interests to be subordinated to its own. This is obviously a dangerous principle in anything other than a liberal society, but it is perhaps a workable one for our purposes tonight. The general conclusion, therefore, is that a doctor should disclose as little as possible. Fitchett v. Furness is not a satisfactory guide as to principle, because here was the exceptional case in which the doctor had admittedly been indiscreet in writing the certificate. The case of the paranoic likely to murder his supposed persecutor is a much more borderline case, in which hitherto the authorities have remained silent."

How Did They Die?

A study on the occupational mortality in three Swedish professions, was reported by Erik Ask-Upmark in *Acta Medical Scandinavica*.

1. The occupational mortality was examined in 382 Swedish university men, 508 Swedish printing workers, 741 Swedish street car employees and 700 American doctors. All were males and no case below 30 was included. The printing workers and the street car employees were all from Stockholm, whereas 3 out of 4 university men were from our old universities, Upsala and Lund.

2. The university men did not present any increased incidence of cerebrovascular lesions, nor of intracranial neoplasms. The incidence of tuberculosis and suicides was rather on the low side. The incidence of pulmonary carcinoma was strikingly low (2 cases). Otherwise the professors died along the same lines as the average population.

Continued on the following page

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3. The printing workers died on an average 10 years younger than the university men, yet they managed to present a strikingly large proportion of malignant tumors. Particularly common was bronchial carcinoma during the last 9 years concerned by the investigation (15 cases out of 267 deaths). A strikingly large proportion of printing workers died from tuberculosis. Vascular lesions of the brain were less common than among the other groups.

4. The street car employees were on an average 7 years younger than the university men and 3 years older than the printing workers at the time of death. Malignant tumors were just as common in this group as in the printing workers although the proportion of bronchial carcinomas was less pronounced. A striking feature, as yet unexplainable, was the high incidence of intracranial tumors. Suicides were rather more common than in the average population.

5. The American doctors were used for a comparison with the Swedish conditions. Their average span of life approached that of the Swedish university men. The most striking feature was the high incidence of cardiovascular deaths, amounting to more than 50% of all deaths, 3 out of 4 cardiac deaths being of coronary character.

6. Among more rare causes of death there were from 1.590 deaths — university men, printing workers, American doctors—5 cases of ruptured subarachnoid aneurysm, 3 cases of polycystic kidneys, 3 cases of periarteritis nodosa and 2 cases of amyotrophic lateral sclerosis.

The university men concerned by the present investigation have all been my colleagues, many of them my personal friends, several of them my esteemed teachers, a few of them my near relatives. They lived and died as mental workers of the society and they died essentially from the same causes of death as the average man. There is not the slightest evidence that work along the scholar line should be apt to favor the development of cerebral disease. It may

Schering

be said that the average age of the university men exceeded that of the more manual workers with whom they were compared and that bronchial carcinoma as a cause of death was strikingly rare. Otherwise, they behaved as other human beings. This paper is intended to be a humble requiem in their memory."

Costs of Medical Care

A "Commission on the Cost of Medical Care," to delve into every phase of medicine where cost or spending is involved, was announced by the American Medical Association. An initial grant of \$100,000 was appropriated to launch the study.

"This study-project is being undertaken," said Dr. Louis M. Orr, Orlando, Fla., president of the A.M.A., "because the American public is spending increasing amounts of money for all types of medical care. These expenditures involve the peoples' lives, health, and pocketbooks. We would like to find where economies may be achieved in the best interests of the patient. The commission will analyze the cost picture from every angle and try to come up with some sound advice and suggestions."

The commission, whose members will be announced shortly, will serve as a "little Hoover Commission" to study all medical care costs, including doctors' fees, hospital charges, nursing cost, drug expenditures, and health insurance premiums.

The American Medical Association, Dr. Orr said, is "well aware that more physician-patient relationships have been strained by a misunderstanding about fees than perhaps any other disagreement. A patient has every right to know why he needs treatment or surgery, what it will consist of, and what it will cost—particularly where major services are rendered."

It is hoped, Dr. Orr added, that the study will also provide some sound advice for the consumer on how to get the most benefit from his health dollar. Members of the commission will be announced shortly, and it is expected to be functioning this spring.

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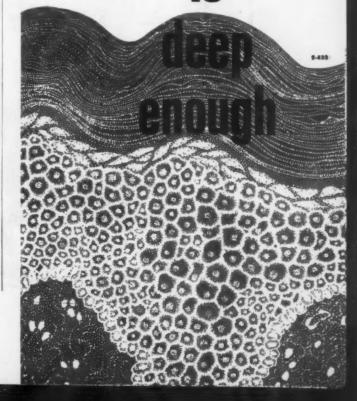
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(VOL. 88, NO. 6) JUNE 1960

Clinical Pharmacology Grants

The Burroughs Wellcome Fund announced through its President, Mr. W. N. Creasy, a program of grants to medical schools to maintain new faculty positions in clinical pharmacology.

During the next five years, the Fund will award five grants to medical schools to underwrite the salary of a full-time teacher in clinical pharmacology. Each of these grants will be for a total amount of \$75,000, payable over a five-year period.

Clinical investigators are physicians in hospitals or private practice who apply new drugs

to specific diseases in enough patients to confirm that their usefulness and safety warrant making them commercially available for use by the medical profession.

Mr. Creasy cited, as a reason for setting up the grants, the shortage of qualified physician investigators specializing in clinical pharmacology. The program of grants, he added, should stimulate both research and training in clinical pharmacology. This would contribute significantly to the development of new and better drugs to combat the many diseases which still defy treatment.





Thinning Hair Does Not Lead to Baldness

Young women whose hair suddenly begins to fall out need have no fear they will be left looking like actor Yul Brynner.

Drs. William B. Guy and Walter F. Edmundson of Pittsburgh, writing in *Archives of Dermatology*, said the condition is most likely temporary and can be treated successfully.

"It occurs in transitory episodes, lasting for several weeks usually," they said. "The typical patient is a vigorous otherwise healthy woman.

"Needless to say, the emotional overtones in this situation are great. Some men take the state of their hair seriously. Practically all women do.

"It is probably a physiologic phenomenon. In these people a significant percent of hairs enter the resting phase simultaneously. When they fall out in a short period of time, the situation causes alarm."

The authors said the hair that falls out usually is replaced by new hair growth. They said they had been able to arrect the process by administering corticosteroid hormones.

Medical Faculty Awards

Fourteen promising young medical school faculty members have been named this year to share \$250,000 under the Medical Faculty Awards program of Lederle Laboratories Division, American Cyanamid Company.

Dr. B. W. Carey, Lederle Medical Director, stated in announcing the awards that their purpose is "to assist able young men and women who are working and contemplating further full-time academic careers in the pre-clinical and certain clinical departments of medical schools; to enable these departments to offer opportunities for favorable development of promising individuals as members of the full-time faculty and to provide recognition, encouragement, and incentive for outstanding clinical teachers and scholars."

Dr. Carey indicated that over the seven-year span of the grants, more than \$1,750,000 has gone to 105 faculty members in 55 United States and Canadian medical schools.

The awards are generally made for terms not

Continued on page 214a

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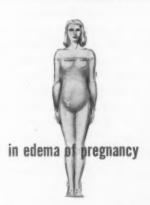
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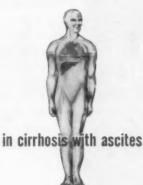
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"All three of the patients with Laennec's cirrhosis, ascites and edema had a favorable response, with a mean weight loss of 8 lbs., during the five-day treatment period with a slight decrease in edema." Castle, C. N., Conrad, J. K. and Hecht, H. H.: Arch. Int. Med., 103:415, (March) 1959.



"In a study of 10 patients with the nephrotic syndrome associated with various types of renal disease, orally administered chlorothiazide was a successful, and sometimes dramatic, diuretic agent." Burch, G. E. and White, M. A., Jr.: Arch. Int. Med., 103:369, (March) 1959.



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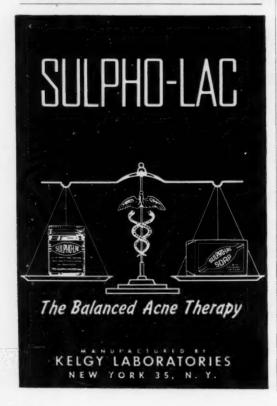
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NEWS AND NOTES—Continued

exceeding three years, and fall into three categories:

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- To bring into the school a new faculty member not previously supported either by budget or research funds.
- To continue the salary of an individual previously supported from sources outside the medical school, such as research fellowships or grants.

All medical schools in the United States and Canada are eligible for the Lederle awards. Nominations are made to the Awards Committee through the offices of deans of the medical schools.

New Hospital at La Jolla

Plans for a Scripps Memorial Hospital at La Jolla, California, construction of which is estimated to cost \$4,000,000, are underway. Work on the seven-story, 250-bed facility is expected to start in 1960 and will be completed within two years. The hospital will have a central nursing station to care for patients in rooms arranged around the perimeter of the building. All surgical, adjunct, and administration facilities will be located on the ground floor. The hospital's patient rooms will have cantilevered balconies in the main tower. Present plans allow for future expansion.

Concluded on page 218a



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NEWS AND NOTES—Concluded

Tuberculosis Research Facilities

The Colorado Foundation for Research in Tuberculosis, housed in the Webb building on the University of Colorado Medical Center campus, Denver, will add a third floor to the structure to expand its facilities for research in biochemistry and the genetics of bacteria.

Downstate Medical Center, Brooklyn

Four faculty members have recently been appointed at the State University of New York Downstate Medical Center in Brooklyn. Dr. David L. Benninghoff, formerly instructor in radiology at Temple University Medical School, Philadelphia, was named assistant professor of radiology. Dr. David Hewitt becomes assistant professor of environmental medicine and community health; he was formerly at Oxford, England. Dr. Daniel S. Feldman, director of the neurological division of Maimonides Hospital, Brooklyn, was named assistant professor of neurology, and Dr. Norman S. Blackman, cardiac consultant to the New York City Department of Health, will be clinical assistant professor of medicine.

MEDICAL TEASERS

Answer to puzzle on page 65a

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N	A	7	A	4		0	0	E	3		7	3	A	R

Midget Baseball Presents Health Hazards

Little league baseball presents a situation that can prove harmful to the health of participating youngsters, say Drs. Thomas E. Shaffer, Columbus, Ohio, and John L. Reichert, Chicago, in Today's Health magazine.

With regard to injuries, Dr. Reichert said, "Pre-adolescent and adolescent children are in a vulnerable age.

"During this age there are periods of rapid growth with temporary maladjustments and weaknesses. During these periods, the child is particularly susceptible to dislocations of joints and to bone injuries."

Dr. Shaffer said athletic competition for children is undesirable when organized along adult patterns. In such cases, he said, the unavoidable emphasis placed on winning puts too many pressures on children.

"Most of the undesirable features of the little leagues could be eliminated by discontinuing sponsorship of teams by business organizations, by eliminating tournaments except on a community-wide championship schedule, by requiring medical examination at the start of a season and during the season if accident or illness occurred, and by requiring trained, experienced individuals in positions of leadership."

The article was written by Dennis Orphan, associate editor of the magazine.

Nutrition Research Facilities at Boston

A gift of \$100,000 a year for ten years from the General Foods Corporation will provide for expansion of the nutritional research laboratories of the Harvard School of Public Health. It is the largest gift ever made by any business corporation for the capital purposes of Harvard University. A new four-story nutrition laboratory will be part of a projected research structure for the School of Public Health in Boston. The laboratory will occupy the top floors of a proposed 11-story research building of the Harvard School of Public Health, which will be financed in part by a grant of \$1,450,000 from the National Institutes of Health and in part by gifts of individuals, corporations and foundations.

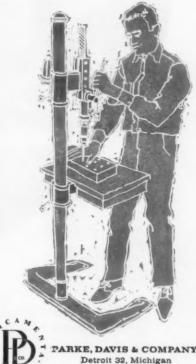
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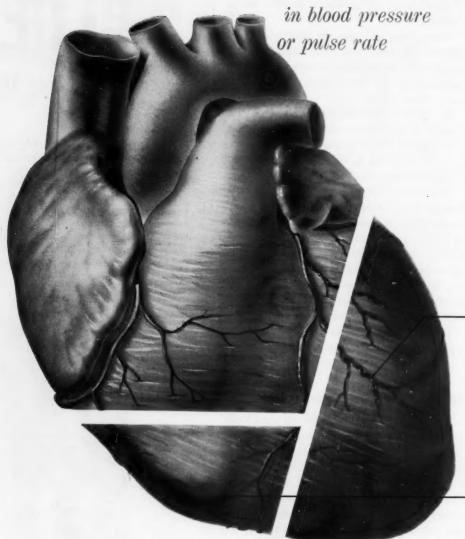
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DIAGNOSIS, PLEASE

(Answer from page 32a)

ECHINOCOCCUS CYST OF LIVER.

Notice the calcified cyst in the liver.

Echinococcus is endemic in Greece.

WHO IS THIS DOCTOR?

(Answer from page 89a)

A. J. CRONIN

MEDIQUIZ

(Answers from page 95a)

1 (A), 2 (E), 3 (B), 4 (C), 5 (A), 6 (A), 7 (C), 8 (E), 9 (A), 10 (A), 11 (C).

WHAT'S YOUR VERDICT?

(Answer from page 53a)

The Appellate Division affirmed the dismissal, holding:

"For us to conclude that the occurrence, in a malpractice action, bespeaks negligence, we must first determine that the common knowledge of laymen is such that they can infer that the harm would not have eventuated but for the negligence of the physician. There are many variables and imponderables concerning hypodermic injections which are not within the common knowledge and experience of men. For aught that a layman could properly infer, the damaging effect of this injection might well have ensued consistently with the exercise of ordinary professional care by the physician."

Based on decision of SUPERIOR COURT OF NEW JERSEY





Covering the Times

Like a full color reproduction of any of our cover paintings? They're printed on wide margin paper, ready for framing. Send 50c for a single print or \$2.50 for six (of a single cover or assorted).

June, traditional month of graduations and weddings, is celebrated on our cover in the graduation scene painted by Alex Ross.

Ross sums up the scene as follows:

"The proud father, Dr. William X, and his devoted wife, who in all probability was a nurse he met while an intern, congratulate their son on completing his medical studies. The son is acutely aware of his new responsibilities, and his fiancee is very proud of him. At the same time the young fry, unaffected by the solemnity of the occasion, put on their own act."

Our Cover Art Editor, Stevan Dohanos, is of course famous for his striking cover paintings for national magazines. Less well known is his work as a designer of U.S. stamps. His latest effort in this field is the 50-star Flag stamp, to be placed on sale next July 4 at Honolulu, Hawaii.

The new 4-cent stamp will be vertical in format, with emphasis placed on the union in order to highlight the 50 stars. The design is borderless, with the legend "JULY 4, 1960" at the top.

The stamp will be issued on Independance Day, when the new 50-star Flag will become official. Dohanos will be on hand in Hawaii to attend the ceremonies, and from there "will sketch my way around the world." The artist also designed the 49-star Flag stamp placed on sale on July 4, 1959.





For those readers who are stamp collectors, we quote the following instructions from a recent issue of "Stamps," a journal in the field of philately.

"Collectors desiring first-day cancellations of the 4-cent 50-star Flag stamp may send addressed envelopes, together with remittance to cover the cost of the stamps to be affixed, to the Postmaster, Honolulu 13, Hawaii. A closefitting enclosure of postal card thickness should be placed in each envelope and the flap either turned in or sealed . . . Envelopes submitted should be of ordinary letter size and each must be properly addressed."

important new therapy in Peptic Ulcer

cessation of all symptoms and complete healing in 70 out of 78 cases as reported in Postgraduate Medicine (Oct.) 1959

"... chymotrypsin offers a new approach to the treatment of peptic ulcer."

In 54 cases, most of them hospitalized, in which chymotrypsin (Chymar) was used in conjunction with other agents "All of the symptoms disappeared and complete healing of the ulcer occurred in 49 (90.7 per cent) of the 54 cases . . . " Average time for cessation of symptoms ... 6 days; for complete healing ... 36 days; average follow-up period ... 12 months. In 24 cases in which Chymar was used alone, "Cessation of all symptoms and complete healing occurred in 21 (87.5 per cent) of the 24 cases . . . " Average time for cessation of symptoms . . . 5.8 days; for complete healing . . . 24 days; average follow-up period . . . 25.5 months.

Conclusions: "Because of the excellent results obtained in 78 cases of peptic ulcer... I strongly recommend its use as a most valuable adjunct in the treatment of this disease."*

*Mozan, A. A.: Postgraduate Med. 26:542, 1959

the superior anti-inflammatory enzyme

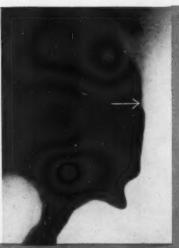
Chymotrypsin

Buccal/Aqueous/Oil

controls inflammation, swelling and pain



Pretreatment roentgenogram made on January 28, 1957 shows a large niche on the upper third of the lesser curvature.



Roentgenogram made on February 23, 1957 shows only a slight Indentation on the lesser curvature.

CHYMAR Buccal—Crystallized chymotrypsin in a tablet formulated for buccal absorption. Bottles of 24 tablets. Enzymatic activity, 10,000 Armour Units per tablet.

CHYMAR Aqueous—Solution of crystallized chymotrypsin in sodium chloride injection for intramuscular use. Vials of 5 cc. Enzymatic activity, 5000 Armour Units per cc.

CHYMAR—Suspension of crystallized chymotrypsin in oil for intramuscular injection. Vials of 5 cc. Enzymatic activity, 5000 Armour Units per cc.



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Geigy, Ardsley, New York



Geigy

safe and practical treatment of the postcoronary patient

A basic characteristic of the postcoronary patient, whether or not cholesterol levels are elevated, is his inability to clear fat from his blood stream as rapidly as the normal subject. 1-3 Figure #1 graphically illustrates this difference in fat-clearing time by comparing atherosclerotic and normal subjects after a fat meal. 3

"Slow clearers" gradually accumulate an excess of fat in the blood stream over a period of years as each meal adds an additional burden to an already fat-laden serum. As shown in figure #2, the blood literally becomes saturated with large fat particles, presenting a dual hazard to the atherosclerotic patient: the long-term danger of deposition of these fats on the vessel walls, 4 and the more immediate risk of high blood fat levels after a particularly heavy meal possibly precipitating acute coronary embarrassment. 5

In figure #3, the test tube at the left contains lipemic serum, while the one at the right contains clear, or normal serum. If serum examined after a 12-hour fasting period presents a milky appearance, this is a strong indication that the patient clears fat slowly and is a candidate for antilipemic therapy in an effort to check a potentially serious situation.

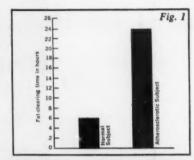
'Clarin', which is heparin in the form of a sublingual tablet, has been demonstrated to clear lipemic serum. 2.6.7 Furthermore, a two-year study using matched controls resulted in a statistically significant reduction of recurrent myocardial infarction in 130 patients treated with 'Clarin'.8

'Clarin' therapy is simple and safe, requiring no clotting-time or prothrombin determinations. Complete literature is available to physicians upon request.

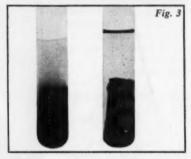
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Clarin

(sublingual heparin potassium, Leeming)







Indication: For the management of hyperlipemia associated with atherosclerosis, especially in the postcoronary patient.

Dosage: After each meal, hold one tablet under the tongue until dissolved.

Supplied: 'Clarin' is supplied in bottles of 50 pink, sublingual tablets, each containing 1500 I.U. of heparin potassium.

*Registered trade mark. Patent applied for.

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*From a clinical investigator's report to Merck Sharp & Dohme.



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